TABLE 1

Caribbean Petroleum Refining LP
Bayamon, Puerto Rico

SPCC PLAN - ADDENDUM 1.0

Compliance Schedule

Activity	**Projected Completion Date**
Install permanent secondary containment system around Tank 605 transformer	December 31, 1999
Restore earthen dikes around Tanks 610, 611 and 612 to provide adequate secondary containment capacity	December 31, 1999
Repair and, if necessary, upgrade facility lighting system in the Tank Farm area	Repair system by January 31, 2000 (1)
Install proper warning sign at the Main Loading Rack	COMPLETE

(1) It is not anticipated that upgrade of the system will be required. However, if it is required, it will be completed by May 31, 2000.

ANDERSON · MULHOLLAND & ASSOCIATES, INC.
ENVIRONMENTAL CONSULTANTS

October 7, 1999

Mr. Michael Hodanish
United States Environmental Protection Agency - Region II
Response and Prevention Branch
2890 Woodbridge Avenue, Bldg. 209
Edison, New Jersey 08837

RE: Caribbean Petroleum Refining LP, Bayamon, Puerto Rico
SPCC Plan - Addendum

Dear Mr. Hodanish:

This letter constitutes Addendum 1.0 to the Spill Prevention, Control and Countermeasure (SPCC) Plan for the Caribbean Petroleum Refining LP (CPR) facility located in Bayamon, Puerto Rico. Revision 1.0 of the SPCC Plan was submitted to your office on September 13, 1999.

This Addendum addresses a number of issues raised in your letter to Mr. Huberto Diaz of CPR dated September 29, 1999. Specifically, a schedule is presented which provides the proposed date of implementation of measures intended to correct certain deficiencies noted in your letter. The schedule of compliance is presented in attached Table 1. CPR will notify EPA upon completion of all measures included in the schedule of compliance. EPA will also be notified of any deviations in the implementation schedule.

This Plan Addendum was prepared using sound engineering practices. I have examined the facility and this Addendum and find this Addendum conforms to the guidelines and provisions of 40 CFR 112.

Date: October 7, 1999

Name: Herbert F. Mulholland

Company: Anderson, Mulholland & Associates, Inc.
New York, New York

Signature: 

Registration Number: New York - 068714

SEAL

110 CORPORATE PARK DRIVE · WHITE PLAINS, NEW YORK 10604 · 914-251-0400 · FAX: 914-251-1286

SPCC PLAN CERTIFICATION

Caribbean Petroleum Refining, L.P.
Bayamon, Puerto Rico

Management Approval Statement

This Spill Prevention Control and Countermeasure Plan is fully supported by the management of Caribbean Petroleum Refining, L.P. (CPR). CPR will implement this Plan and amend it as needed due to expansions, modifications and improvements at the facility.

Julio D. Hernandez
Refinery Manager

9/13/99
Date

Certifying Engineer's Statement

This Plan was prepared using sound engineering practices. I have examined the facility and this Plan and find this Plan conforms to the guidelines and provisions of 40 CFR 112.

Date: September 7, 1999

Name: Herbert F. Mulholland

Company: Anderson, Mulholland & Associates, Inc.
New York, New York

Signature:

Registration Number: New York - 068714

SEAL

Caribbean Petroleum Refining, LP
Bayamon, Puerto Rico

Spill Prevention, Control and Countermeasure Plan
(Revision 1.0)

September 1999

Prepared by:
Anderson-Mulholland and Associates, Inc.
White Plains, New York

Caribbean Petroleum Refining, L.P.
Bayamon, Puerto Rico

SPILL PREVENTION, CONTROL AND COUNTERMEASURE PLAN
(Revision 1.0)

September 1999

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1. INTRODUCTION

Caribbean Petroleum Refining, LP (CPR) has developed this Spill Prevention, Control and Countermeasure (SPCC) Plan for its refinery located in Bayamon, Puerto Rico, in accordance with the requirements of 40 CFR Part 112. The CPR refinery, which is considered an onshore, non-transportation-related facility, is subject to this regulation because it handles oil in above ground tanks in quantities greater than 1,329 gallons and, because of its location, could reasonably be expected to discharge oil into or upon navigable waters of the United States in the event of an oil spill.

CPR also operates a dock facility in San Juan Bay for the loading and unloading of crude oil and products from vessels. Material is transferred to and from the dock facility via a 2.5 mile above ground pipeline system. The dock and the pipeline are classified as "marine-transportation-related" (MTR) facilities. A Facility Response Plan addressing the MTR facilities has been submitted to the U.S. Coast Guard (USCG) and the U.S. Environmental Protection Agency (EPA) in accordance with the requirements of 33 CFR Part 154. The plan was approved by the USCG by letter dated August 31, 1993. CPR's MTR facilities will not be discussed further in this SPCC Plan.

The objective of this plan is to establish: (1) operating procedures to prevent the occurrence of oil spills; (2) control measures to prevent a spill from entering navigable waters; and (3) countermeasures to contain, cleanup and mitigate the effects of an oil spill that impacts navigable water.

This plan has been reviewed and approved by CPR management. The plan has been certified by Mr. Julio Hernandez, the Refinery Manager, who has the authority to commit all the resources necessary to implement the provisions of this plan.

This plan will be amended whenever there is a change in facility design, construction, operation or maintenance which materially affects the facility's potential for the discharge of oil into or upon navigable waters of the United States. The plan will also be amended at the request of the EPA or the Puerto Rico Environmental Quality Board (EQB) following a single spill event in excess of 1,000 gallons or following two discharges of oil in harmful quantities which occur within a 12 month period. Minor changes such as personnel, tank service, etc. may occur periodically. Such changes will be incorporated into the plan the next time the plan is amended.

A brief description of each of the remaining chapters in this plan is presented below. The plan follows the sequence outlined in 40 CFR 112.7 (see Appendix A).

Chapter 2: Facility Description - This chapter provides a description of the CPR refinery, including manufacturing operations, oil storage and transfer facilities and wastewater treatment systems.

Chapter 3: Potential Spill Scenarios - Identification of major types of failures which could result in a discharge of oil from the CPR facility is provided in this chapter. This information is provided in accordance with 40 CFR 112.7(b).

Chapter 4: Spill Prevention and Control - This chapter presents a detailed description of storm water drainage features of the CPR facility and describes oil storage and transfer facilities and associated containment and diversion systems. This information is provided in accordance with applicable sections of 40 CFR 112.7(c) and (e)(1), (2), (3) and (4).

Chapter 5: Inspections and Records - CPR's procedures for the inspection of tanks, secondary containment systems and transfer pipelines are presented in this chapter. This information is provided in accordance with 40 CFR 112.7(e)(8).

Chapter 6: Security - CPR facilities and procedures designed to prevent unauthorized entry and operation of the facility are described in Chapter 6. This information is provided in accordance with 40 CFR 112.7(e)(9).

Chapter 7: Personnel Training and Briefings - This chapter describes CPR's program for training facility personnel in oil spill prevention and control. Routine spill prevention briefings are also discussed. This information is provided in accordance with 40 CFR 112.7(e)(10).

Chapter 8: Spill Countermeasures - Emergency response procedures for the mitigation of an actual oil spill are presented in this chapter. These procedures are consistent with those presented in CPR's OPA 90 Facility Response Plan. This information is provided in accordance with 40 CFR 112.7(e)(10).

2. FACILITY DESCRIPTION

This section presents a general description of the Caribbean Petroleum Refining, LP facility, including facility location, layout and production processes. A description of CPR's wastewater collection and treatment facilities is also provided. Additional detail on the design and operation of CPR's process areas, storage tanks and transfer facilities is provided in Chapter 4 of this plan.

2.1 Facility Location

Caribbean Petroleum Refining, LP, a petroleum refinery facility, is located in the Luchetti Industrial Park in Bayamon, Puerto Rico. The plant is about three miles south of the northern coast of the island and the Atlantic Ocean. The location of the facility is shown in Figure 2-1.

The CPR site encompasses approximately 179 acres, of which 115 is developed. The facility is divided into a tank farm, a process area, an administration area and a wastewater treatment facility. In addition, CPR owns and operates a loading dock facility on San Juan Bay in Guaynabo, approximately 2.5 miles from the site.

Geographical coordinates at the midpoint of the facility are:

Latitude:	18°25'12" N
Longitude:	65°08'12" W

The site is bounded to the west by industrial facilities, to the south and east by Fort Buchanan, a U.S. military reservation, and to the north by undeveloped land. The nearest water body is Las Lajas Creek which runs through the northwestern section of the refinery. San Juan Bay is located approximately 2.5 miles to the north of the facility. The locations of these water bodies are also presented in Figure 2-1.

2.2 Facility Description

Refinery operations commenced at the site in 1955 under the name of Caribbean Refining

Corporation. The facility was purchased in 1962 by the Gulf Oil Corporation, at which time the name was changed to Caribbean Gulf Refining Corporation. Chevron Corporation acquired ownership of the facility when it purchased Gulf Oil Corporation in 1984. In 1987, the facility was sold to First Oil Corporation and commenced operation as an independent refinery. First Oil Corporation is a privately held corporation, incorporated in the State of Delaware, with principal offices in London, England. Since a corporate reorganization in 1995, the facility is officially named Caribbean Petroleum Refining, LP.

In 1995, refining operations were temporarily shut down. Operations were limited to receipt of products from CPR's marine terminal via pipeline, storage and blending of products in the tank farm and distribution of products by tanker truck or pipeline. Products included gasoline, jet fuel, diesel and fuel oil. Refining operations resumed in the second quarter of 1999 after a comprehensive refurbishment of process equipment.

Operations at the facility are conducted in three general areas - the Process Area, the Tank Farm Area and the Wastewater Treatment Plant Area. In addition, there are three product loading racks located in the northwestern corner of the process area. The areas are interconnected by a network of above and below ground piping. There is also an administration area in the southwestern corner of the facility which houses offices, laboratories and related facilities. Figure 2-2 provides an overall facility plan which shows the relative location of each of the areas. Figure 2-3 presents a site map which provides further detail on site operations. A large scale copy of this site map is presented in Plate 1. Further information on the various operating areas is provided below.

Process Area - CPR operates a 48,000 barrel per day petroleum refining facility at the site. CPR processes crude oil through two crude distillation units, a fluidized catalytic cracking unit, a vacuum distillation unit, a catalytic reforming unit, a hydrotreater unit, and other ancillary operating units. Utility systems are located throughout the process area and include boilers, a boiler feed water treatment unit, cooling towers, fuel oil and fuel gas systems, a potable water system and a nitrogen system. Major products have historically included unleaded gasoline, fuel oil, fuel gases, kerosene, diesel fuel, residual fuels, petroleum distillates, and asphalt. There has been no manufacturing of secondary petrochemicals at the site. Products are either distributed to local markets through tanker

truck or pipeline or transferred via pipeline to the docking facility for transportation off the island.

Tank Farm Area - Raw materials, intermediates and products manufactured by CPR are stored in bulk storage tanks in the Tank Farm Area. Materials are conveyed to and from the tank farm via above and below ground pipelines. CPR operates approximately 45 above ground steel tanks ranging in capacity from 500 to over 200,000 barrels. The tanks are used for storage of crude, intermediates, final products and slop oil. The locations of these tanks are provided in Figure 2-3 and Plate 1. All tanks are designed, operated and maintained to prevent the release of contents to the surrounding environment. The tank farm also includes an LPG storage area. Further information on CPR's bulk storage tanks and associated conveyance systems is provided in Chapter 4 of this plan.

Product Loading Area - CPR operates four loading areas, but only three of them are for the transfer of product to tanker trucks: the main loading rack (which handles gasoline and diesel); the asphalt loading rack (which handles asphalt, kerosene, fuel oil and residual fuel); and the LPG loading rack. The fourth loading area consists of the transfer of product to drums transported by the customer. This loading area is located at the marketing warehouse and handles motor oil (SAE-40) and hydraulic oil (H-68).

The location of each of these loading racks is shown in Figure 2-3 and Plate 1. Since there is no threat of a release of oil from the LPG loading rack, this facility will not be discussed further in this plan. Further information on the main loading rack, the asphalt loading rack and the marketing warehouse is provided in Chapter 4 of this plan.

2.3 Description of Wastewater Collection and Treatment Systems

The CPR facility is served by several different wastewater collection systems. The systems are designed to reduce the volume of contaminated wastewater requiring treatment by segregating contaminated and uncontaminated wastewater to the maximum extent possible. At the process area, a collection system exists for process wastewater and contaminated storm water. This system also receives water draw off from bulk storage tanks and oily runoff from several pump areas. The CPR facility is also serviced by uncontaminated storm water and sanitary

wastewater collection systems. The general location of each of these systems is presented in Figure 2-4.

CPR has been issued a National Pollution Discharge Elimination System (NPDES) Permit for the discharge of wastewater into area surface waters. The permit allows the discharge of treated process wastewater as well as uncontaminated storm water into Las Lajas Creek through Outfalls 001 and 002, respectively.

A description of CPR's wastewater collection systems and treatment plant is presented below.

Process Wastewater Collection System

The process sewer collects wastewater generated in CPR's petroleum refining process units and conveys the wastewater by gravity to CPR's process wastewater treatment facility. The process sewer also collects storm water falling within the process area. The process sewer system consists of a network of underground pipes ranging in diameter from 4 inches to 15 inches. Generally, service connections are constructed of cast iron piping while sublaterals, laterals, and mains are constructed of concrete.

In addition to wastewaters generated in the refining process and contaminated storm water falling within the process area, the following waste streams are also discharged into the process wastewater treatment plant via the process sewer:

(1) Water draw off from bulk storage tanks is discharged to the process sewer main via underground pipelines. Discharge of water is carefully monitored by trained operators to minimize the release of hydrocarbon into the system.

(2) Oily runoff from concrete lined and bermed pump areas located throughout the tank farm is routed to the wastewater treatment plant via underground pipelines. CPR personnel are implementing improved housekeeping procedures to minimize the release of hydrocarbon into the system from these areas.

Uncontaminated Storm Water Collection System

The CPR storm water management system consists of a series of channels, swales, catch basins, pumps, manholes, inlets and pipes designed for the collection and conveyance of storm water throughout the site. This system serves the tank farm, non-process areas and a number of upstream properties. Under normal operating conditions, storm water managed in this system does not come into contact with contaminated equipment or surfaces. Storm water accumulated within storage tank secondary containment areas is inspected for the presence of hydrocarbon sheen prior to discharge into the system. All uncontaminated storm water flows by gravity through an underflow oil skimmer into the Storm Water Retention Pond. From this unit, storm water is discharged into Las Lajas Creek through NPDES-permitted outfall No. 002. The outfall is equipped with a flow monitoring and sampling device.

Sanitary Wastewater Collection System

The sanitary wastewater sewer system is designed to collect domestic wastewater generated at a number of locations throughout the refinery process, maintenance and administrative areas. This wastewater is not treated on-site. Sanitary wastes are discharged into the municipal sanitary collection system and treated at the Puerto Nuevo Regional Sewerage Treatment Plant, operated by the Puerto Rico Aqueduct and Sewer Authority. Treated plant effluent is discharged into San Juan Bay.

Wastewater Treatment Plant

The Process Wastewater Treatment Plant (WWTP) is located north of the refinery processing area and contains facilities for the treatment of oily process wastewater and contaminated storm water. With the occasional exception of maintenance activities involving de minimis volumes of oil, CPR personnel do not intentionally discharge oil directly into the process sewer. Despite significant engineering, operational and maintenance safeguards, however, it is possible that oil can enter the process sewer as a result of leaks, spills and other unplanned events. As described below, CPR's WWTP is specifically designed to remove such quantities of oil from the wastewater. A knockout pit, two primary oil/water/solids separators, a secondary oil/water/solids separator and a biological treatment plant have effectively prevented

release of oil into local surface waters. A schematic diagram of the WWTP is presented in Figure 2-5.

Wastewater entering the process sewer is channeled to the Solids Knockout Pit (SKOP) for gravity settling of larger solids from the process wastewater. The SKOP is an inground, open top, reinforced concrete tank. Solids generated in the unit are regulated as hazardous waste upon removal. Water phase from the unit is discharged by gravity through underground steel pipes to the API Separator primary bay. The API Separator is an inground, reinforced concrete structure designed for primary oil/water/solids separation. The unit receives SKOP effluent, digester decant, and water phase from the slop oil tanks. Floating oil is removed and transferred to Slop Oil Tanks 1000 and 1001 for recovery. Solids generated in the unit are regulated as hazardous waste upon removal. Water phase flows by gravity through an inground, concrete open channel into the Corrugated Plate Interceptor (CPI). The CPI is an inground, reinforced concrete unit designed for enhanced primary oil/water/solids separation. Floating oil is transferred to the slop oil tanks for eventual recovery. Solids generated in the unit are regulated as hazardous upon removal from the unit. Water phase from the CPI is pumped to Equalization Tank ET-2.

Slop Oil Tanks 1000 & 1001 are above ground, steel tanks which receive slop oil from the API Separator and CPI as well as float from the IAF unit. Recovered oil is pumped back to tankage for recycling to process units. The water phase from the unit is discharged by gravity via underground pipes into the primary bay of the API Separator. Solids and sludges removed are managed as hazardous waste.

Equalization Tank ET-2 is an above ground, steel tank with a storage capacity of 840,000 gallons. It serves to equalize flow through the biological treatment plant. Additional oil/water/solids separation occurs in the unit as well. Any solids generated in this unit are managed as hazardous waste. Water phase from the tank is pumped to the Induced Air Flotation (IAF) Unit. This unit is an elevated steel tank designed for secondary oil/water/solids separation. IAF float is transferred to the slop oil tanks by gravity through an above ground steel pipe for eventual recovery of oil. Any solids or sludges that may be generated in this unit are managed as hazardous waste. Water phase from the IAF unit is discharged by gravity to the bioreactor through a steel pipe that runs alternately underground and above ground. Biological treatment occurs in two inground, reinforced concrete tanks arranged in series. Each bioreactor is followed

by a concrete final clarifier.

Effluent from the final clarifier is discharged into the Aeration Basin. This basin is an unlined, earthen surface impoundment designed to provide natural aeration prior to discharge of treated wastewater. The unit has a volume of approximately 5.5 million gallons and provides a retention time of 6 to 7 days. Effluent from the basin is pumped to the sand filtration unit. This unit consists of four above ground steel tanks designed to provide final filtration to effluent prior to discharge through Outfall No. 001 into Las Lajas Creek. Backwash water is returned to the bioreactors. Effluent flows by gravity into the creek.

3. POTENTIAL SPILL SCENARIOS

CPR has identified the following potential sources of oil spills at its facility. For each source, various types of releases have been identified. Types of releases can be generally characterized as minor (e.g., equipment leaks) or major (e.g., equipment or unit rupture, tank overfill). For each type of failure at each potential source, the following information has been developed, as appropriate, and is presented in the following sections.

- Direction of flow of spilled material
- Rate of flow of spilled material
- Total quantity of material discharged

All major spill scenarios are addressed, even though CPR believes that there is not a reasonable potential for certain spill scenarios such as total rupture and failure of a bulk storage tank or pipeline based on facility experience. In addition, each major spill scenario is evaluated assuming simultaneous failure of secondary containment systems. Failure of secondary containment systems may involve a breach in a containment system, a malfunction of a drainage valve or other problems. (See Section 4.2 for additional information on secondary containment systems.) Figure 3-1 provides information on the direction of flow of released oil under the various release scenarios described below. Spill scenarios involving failure of secondary containment systems would trigger response procedures under CPR's OPA 90 Facility Response Plan.

3.1 Above Ground Bulk Storage Tanks

- Leak - There is a potential that bulk storage tanks and associated valves, pumps and piping could experience leaks on occasion. Based on design, operation, and maintenance considerations, maximum flow rate of such a release would not be expected to exceed 100 barrels per hour (bph). Since each area is visually monitored at least once every eight hours, the total quantity of any spill would not exceed 800 barrels. Since all bulk storage tanks are provided with adequate secondary containment, any such leak would be fully contained and would not impact surface waters.

If secondary containment systems failed, however, spilled oil would escape the containment area and would enter the facility's storm water collection system. Oil would flow by gravity into CPR's oil/water separator and would enter the Storm Water Retention Pond. It should be noted that, in the event of failure of the secondary containment system, oil would be readily visible in the storm water collection system and would likely be observed by CPR personnel in a short period of time. Assuming a worst case response time of one hour, the total quantity of oil released would be limited to approximately 100 barrels. Under normal conditions, the Storm Water Retention Pond has the capacity to contain this volume of oil without a release to Las Lajas Creek through NPDES Outfall No. 002. (See Section 4.1 for additional information on CPR's storm water drainage system.)

- Rupture - In the event of rupture and total failure of a bulk storage tank, spilled material would be totally contained within diked areas. Under the worst case spill event (i.e., total failure of a tank), discharge would be virtually instantaneous. The maximum predicted quantity (based on maximum tank size) would be approximately 217,000 barrels. Because all the spilled material would be fully contained by a secondary containment structure, no such release would impact surface waters.

  If secondary containment systems failed, however, oil would be released in various directions based on the location of the tank, as described below:

  (1) A portion of the oil could flow off-site into wetland areas to the north and east of the facility, onto Route 28, onto the grounds of Fort Buchanan, which is located across Route 28, or into Santa Catalina Creek, which is located approximately 1,000 feet east of the tank farm. One of these flow directions would be especially probable if the tank failure occurred along the eastern or northern perimeter of the tank farm.

  (2) A portion of the oil would flow down Avenues A, B, C and/or D toward the process area. Oil would pool in low areas and would enter the storm water collection and process sewer systems. Depending on the tank location, oil could discharge directly into the Storm Water Retention Pond or into CPR's wastewater

treatment units. Oil would ultimately escape these units and would be discharged into Las Lajas Creek though NPDES Outfall Nos. 001 and 002.

(3) A portion of the oil would flow into and be contained by adjacent secondary containment areas.

- Overfill - There is a potential that bulk storage tanks could experience a release of oil as a result of overfilling the tank. If such an event were to occur, the maximum release rate would not exceed the maximum pumping rate (i.e., 16,000 bph). Any such release would be detected immediately since all transfer operations are monitored continuously. Pumping would be shut down and the total quantity of released material would be limited to approximately 800 barrels (assuming a three minute response time). All spilled material would be contained in the tank's secondary containment system. No such release would impact surface waters.

  If secondary containment systems failed, however, spilled oil would escape the containment area and would enter the facility's storm water collection system. Oil would flow by gravity into CPR's oil/water separator and would enter the Storm Water Retention Pond. Under normal conditions, the Storm Water Retention Pond has the capacity to contain this volume of oil without a release to Las Lajas Creek through NPDES Outfall No. 002.

3.2 Facility Pipelines

- Leak - There is a potential that refinery pipelines could experience minor leaks at flanges, valves, pump stations, etc. The rate of such a spill is difficult to predict but would not be expected to exceed 10 bph, based on design, operation, and maintenance considerations. Since all facility areas are visually monitored at least once every 8 hours, the maximum quantity of spilled material would be 80 barrels. Pipelines transferring material are not provided with secondary containment systems. The direction of flow of any such discharge will depend upon the location of the release. Various spill scenarios are summarized below:

(1) If the release occurred at a point at which the pipeline is located within a storage tank secondary containment area, spilled oil would be contained within the area and would not impact surface waters. If secondary containment systems failed, however, spilled oil would escape the containment area and would enter the facility's storm water collection system. Oil would flow by gravity into CPR's oil/water separator and would enter the Storm Water Retention Pond. Under normal conditions, the Storm Water Retention Pond has the capacity to contain this volume of oil without a release to Las Lajas Creek through NPDES Outfall No. 002. It should be noted that, in the event of failure of the secondary containment system, oil would be readily visible in the storm water collection system and would likely be observed by CPR personnel in a short period of time, thereby limiting the total volume of oil released.

(2) If the release occurred at a point at which the pipeline is located within the process area, spilled oil would enter CPR's process sewer and would be discharged into CPR's wastewater treatment plant and would be contained by CPR's oil recovery system. This spill scenario also applies to a leak from a refining process unit since flow rates through the process units are generally the same as flow rates through associated pipelines. Such a spill would not be expected to impact surface waters.

(3) If the release occurred outside of a diked area and outside of the process area, oil would pool in the vicinity of the spill or would be directed overland based on the topographic contours of the facility towards the storm water sewer located throughout the facility. Oil would flow by gravity into CPR's oil/water separator and would enter the Storm Water Retention Pond. Under normal conditions, the Storm Water Retention Pond has the capacity to contain this volume of oil without a release to Las Lajas Creek through NPDES Outfall No. 002. Generally, if such a discharge happened to occur along the extreme boundary of the facility, oil could possibly flow overland onto adjacent properties, into wetlands located to the north and east of the tank farm or directly into Las Lajas Creek along the western boundary to the refinery. This is unlikely since the activities that could give rise to discharges are conducted well away from property boundaries. There are no locations at which pipelines cross over surface water bodies.

- Rupture - If a rupture and total failure of a pipeline were to occur during pumping, the maximum flow rate would be 16,000 bph. Any such release would be quickly detected by facility operators due to pressure drop in the pipeline. All pumps would be shut off immediately, thereby limiting the total quantity of material released to the environment to approximately 800 barrels (assuming a three minute response time). The direction of flow of any such discharge will depend upon the location of the release. Various spill scenarios are summarized below:

  (1) If the release occurred at a point at which the pipeline is located within a storage tank secondary containment area, spilled oil would be contained within the area and would not impact surface waters. If secondary containment systems failed, however, spilled oil would escape the containment area and would enter the facility's storm water collection system. Oil would flow by gravity into CPR's oil/water separator and would enter the Storm Water Retention Pond. Under normal conditions, the Storm Water Retention Pond has the capacity to contain this volume of oil without a release to Las Lajas Creek through NPDES Outfall No. 002.

  (2) If the release occurred at a point at which the pipeline is located within the process area, spilled oil would enter CPR's process sewer and would be discharged into CPR's wastewater treatment plant. A portion of the oil would be contained by CPR's oil recovery system. A portion of the oil may escape these units and could be discharged into Las Lajas Creek though NPDES Outfall No. 001.

  (3) If the release occurred outside of a diked area and outside of the process area, oil would pool in the vicinity of the spill or would be directed overland based on the topographic contours of the facility towards the storm water sewer located throughout the facility. Oil would flow by gravity into CPR's oil/water separator and would enter the Storm Water Retention Pond. Under normal conditions, the Storm Water Retention Pond has the capacity to contain this volume of oil without a release to Las Lajas Creek through NPDES Outfall No. 002. Generally, if such a discharge happened to occur along the extreme boundary of the facility, oil could possibly flow overland onto adjacent properties, into wetlands located to the north and east of the tank farm or directly into Las Lajas Creek along the western

boundary to the refinery. This is unlikely since the activities that could give rise to discharges are conducted well away from property boundaries.

3.3 Tank Truck Loading Areas

- Leak - There is a potential that leaks may occur during loading of tanker trucks at the main loading dock or at the asphalt loading dock. Leaks may be associated with valves, pumps, hoses and piping or could be caused by releases from the truck itself. Based on design, operation, and maintenance considerations, maximum flow rate of such a release would not be expected to exceed 10 bph. Since any such release would be detected immediately by the operator, pumping would be shut down and would limit the total quantity of released material to less than one barrel (assuming a three minute response time). All spilled material would flow by gravity into the process sewer system and would be contained in CPR's oil recovery system. No such release would impact surface waters.

- Rupture - If a rupture and total failure of a tanker truck compartment occurred during loading operations, discharge would be virtually instantaneous. The maximum predicted quantity (based on maximum compartment size within the tanker truck) would be approximately 3,000 gallons of gasoline or 4,000 gallons of diesel at the main loading rack and 4,000 gallons at the asphalt loading rack. Each loading rack is provided with a bermed drainage area which directs spilled material to the process sewer where oil will be contained in CPR's oil recovery system and prevented from impacting surface waters.

3.4 Other Areas

CPR manages oil in limited quantities at a number of other areas at the facility, such as slop oil unloading areas, vehicle fueling areas, motor and hydraulic oil loading area (marketing warehouse), pump station fuel tanks, container storage areas and transformers. The total volume of a spill from these areas would range from less than one barrel to approximately 100 barrels. All of these areas are provided with adequate secondary containment systems to prevent any released oil from impacting surface waters. However, if any of these secondary containment systems failed, oil would generally be directed overland based on the topographic contours of the

facility towards the storm water sewer located throughout the facility. Oil would flow by gravity into CPR's oil/water separator and would enter the Storm Water Retention Pond. Under normal conditions, the Storm Water Retention Pond has the capacity to contain these volumes of oil without a release to Las Lajas Creek through NPDES Outfall No. 002.

4. SPILL PREVENTION AND CONTROL

This section describes engineered controls and management practices designed to prevent the release of oil from CPR facilities and to control the migration of any spilled material to prevent the spill from entering navigable waters.

4.1 Facility Drainage

The CPR facility is designed and operated to ensure that oil is not released to local surface waters via overland flow or through CPR's process sewer or storm water drainage system. A description of facility drainage patterns in diked and undiked areas is presented below.

4.1.1 Diked Areas

All bulk storage tanks in hydrocarbon service at the CPR facility are provided with a secondary containment system designed to prevent spilled or leaked oil from entering surface waters or the facility's storm water drainage system. Each secondary containment system is equipped with a manually operated valve which is normally closed to contain spills and precipitation within the area. Accumulated precipitation is released from each containment area into the facility storm water collection system by opening the containment system valve. All valves are of the manual, open and closed design. Released water from secondary containment systems is discharged into CPR's storm water collection system which flows into the Storm Water Retention Pond and ultimately discharges into Las Lajas Creek through NPDES Discharge Point No. 002. Released water is not discharged directly into a watercourse. The locations of secondary containment systems and associated storm water collection systems are presented in Figure 4-1.

Water is released from a diked area only after the facility operator has visually examined the water surface for the presence of oil or an oil sheen to ensure that no oil will escape the containment area. Records are maintained of each storm water discharge event. A copy of the Record of Dike Drainage is presented in Appendix B. A detailed description of secondary containment systems at the CPR facility, as well as associated drainage systems and management procedures, is presented in Section 4.2, below.

The refinery process area is provided with a secondary containment system consisting of concrete curbs and concrete diversion ditches. This system ensures that all storm water falling within the process area is routed via the process sewer to the wastewater treatment plant for removal of any oil that may have contacted the storm water within the process area. The general location of the process area containment system is presented in Figure 4-1.

There are a number of pump stations located throughout the process area and tank farm which are equipped with secondary containment systems consisting of a concrete slab floor surrounded by a continuous concrete curb. These pump stations are equipped with a catch basin which conveys oily storm water to the process sewer system, thus preventing potentially contaminated storm water from entering the storm water collection system.

4.1.2 Undiked Areas

CPR's storm water collection system is designed to ensure that precipitation falling in undiked areas is properly collected and segregated from potentially contaminated surfaces or equipment. This system consists of a series of concrete channels, earthen swales, pumps, and pipes. Storm water flows by gravity through the system, passes through an underflow oil/water separator, and is discharged into the Storm Water Retention Pond. The separator is designed to prevent the discharge of small volumes of oil into the Storm Water Retention Pond. Accumulated oil within this unit is removed by vacuum truck.

The Storm Water Retention Pond is an earthen surface impoundment with a depth of 10 feet and a storage capacity of 2,140,775 gallons. The pond is equipped with two underflow baffles in series which are designed to contain any oil that may have escaped the water/oil separator and to prevent the discharge of oil into surface waters. The freeboard of the upstream baffle is approximately 24 inches while the freeboard of the downstream baffle is approximately 12 inches. Based on the dimensions of the pond and the freeboard of the baffles, approximately 5,000 barrels of oil could be contained within the pond under optimum conditions. The effective capacity of the containment system is decreased under unfavorable weather conditions, such as extreme storm water flow rates experienced during heavy rainfall events.

The Storm Water Retention Pond is not subject to periodic flooding. Based on the Flood Insurance Rate Map of the area, revised July 1981 (Federal Insurance Administration, Federal

Emergency Management Agency), the pond and all sections of the process area and tank farm are situated outside of the 500-year floodplain of Las Lajas Creek.

From the Storm Water Retention Pond, storm water is discharged into Las Lajas Creek through NPDES-permitted outfall No. 002. In accordance with the terms of CPR's NPDES Permit No. PR0000370, discharge from Outfall 002 is monitored for a number of parameters including, but not limited to, flow rate and oil and grease. In addition, the permit includes a special condition which prohibits the discharge of any wastewater from the outfall which contains an oil sheen. There are no other storm water discharge points from the CPR facility. Also, there are no bypasses which would permit the discharge of storm water from the CPR facility into local surface water bodies without first passing through the Storm Water Retention Pond.

The locations of major components of CPR's storm water collection system are presented in Figure 4-1, including concrete channels, the underflow separator and the Storm Water Retention Pond. Also shown in Figure 4-1 is the general direction of flow of storm water at various locations throughout the facility.

4.2 Bulk Storage Tanks

CPR operates approximately 45 bulk storage tanks in hydrocarbon service. There is one underground storage tank in service at the facility which was installed in 1993. The tanks are listed in Table 4-1 along with the tanks' storage capacity. The locations of the tanks are presented in Plate 1. At CPR, hydrocarbon service includes storage of oil (as defined at 40 CFR 112.2). Prevention, control and countermeasure systems and procedures described in this plan relate to management of oil. This plan does not address liquid petroleum gas (LPG) storage tanks.

4.2.1 Compatibility

All above ground bulk storage tanks are of carbon steel, field welded construction. Welded steel tanks are the most suitable design due to their structural strength, compatibility with petroleum products and resistance to puncture. Tanks are provided with either a fixed cone roof or an internal or external floating roof. CPR's underground tank (which serves as a

refueling tank for facility vehicles) is a horizontally laid 6,000 gallon fiberglass reinforced plastic tank. All tanks were designed based on best engineering practice and are consistent with applicable API standards.

4.2.2 Secondary Containment

All bulk storage tanks in hydrocarbon service at the CPR facility are provided with secondary containment. Secondary containment systems consist of earthen dikes or reinforced concrete walls surrounding one or more tanks. The systems are designed to provide capacity for the largest tank within the system as well as freeboard for accumulated precipitation. For the purposes of defining freeboard needs, the systems are designed to contain 110% of the capacity of the largest tank within the system. The volume displaced by other tanks within a containment system is deducted from the total secondary containment volume when calculating net containment system capacity.

Secondary containment systems are sufficiently impervious to ensure that spilled oil will not permeate, drain, infiltrate or otherwise escape to surface waters before the spill is discovered and recovery actions commence. Under a worst case condition at CPR, this time period would not exceed 24 hours. Evidence of the satisfactory degree of impermeability of the earthen containment systems is provided by the impoundment of accumulated precipitation in the containment systems for periods exceeding 24 hours with no apparent decrease in volume. The secondary containment systems are designed and have demonstrated the ability to contain various petroleum products regardless of physical properties such as viscosity or density, ranging from light products like gasoline to heavy products like residual fuel. Construction and maintenance of each type of containment system is briefly summarized below.

- Earthen Systems - Earthen dikes and containment area floors are constructed of compacted caliche, which is a soil native to the site. The soil is free of large stones, organic matter, wood and debris. After compaction, the earthen dikes are covered with an asphaltic and gravel coating which is intended to prevent erosion. Dikes are designed to withstand hydrostatic head from water rather than petroleum products, which are lighter than water. Dikes are keyed into the containment area floor which is graded to promote drainage of accumulated precipitation. Earthen dikes are routinely maintained to repair eroded asphalt or soil and to remove vegetation which could undermine the structural

integrity of the dikes.

- Concrete Systems - Concrete secondary containment systems are constructed of cast-in-place reinforced concrete slab floors and curbing. Curbing is continuously keyed to the concrete slab floor. Construction joints are provided with chemically compatible sealants and water stops to prevent the uncontrolled release of accumulated liquids. Concrete containment systems are routinely inspected and maintained to prevent excess cracking, spalling or other forms of deterioration which may impact the structural integrity of the unit.

The locations of secondary containment systems for bulk storage tanks are presented in Plate 1. Table 4-2 presents the tank volume and secondary containment system volume for each tank. Capacities of secondary containment systems presented in the table are based on design information. The capacities of certain secondary containment systems are currently being reevaluated. This plan will be updated, as necessary, to reflect any changes in secondary containment system capacity.

4.2.3 Drainage

Each secondary containment area is equipped with a manually operated drainage system which allows the release of accumulated precipitation into the facility storm water collection system. During normal operations, drainage valves are maintained in the closed position in order to prevent the accidental release of any spilled material or oily storm water into the storm water system. Drainage valves are opened to allow the release of accumulated precipitation only after the water surface has been inspected by the operator for the presence of oil. If there is any evidence of an oily sheen on the water surface, accumulated water will not be discharged from the area until such oil has been removed and the water is deemed free of oil.

4.2.4 Tank Inspections

Both routine and detailed inspections of bulk storage tanks are conducted at the CPR facility in order to detect any leaks or spills, or any condition which may result in leaks or spills, of oil or hazardous substances. Inspections are conducted by trained facility personnel experienced in the recognition of hazardous conditions. A full description of CPR's tank

inspection program is presented in Chapter 5 of this plan.

4.2.5 Fail-Safe Engineering

Product tanks in the tank farm are monitored continuously with the aid of a Digital Electric Level Transmitter. The system is composed of a mechanical float that changes the level signal to a pulse which can be scanned from the operator's office with a computer. The information from each tank can then be retrieved by the operator by pressing the appropriate keys. Alarms for high or low level are programmed for each tank. The computer is also connected to a printer which prints any alarm state and also prints an hourly report showing all tank levels. The mechanical level gage can also be read from the side of the tank by the operators. This feature permits the operator to check the local level gage with the computer gage reading to improve the system reliability. All tank level sensing devices are operated, maintained and calibrated in accordance with manufacturers' specifications. If an operator has reason to believe that a level sensing device has malfunctioned and is providing an inaccurate reading, the actual tank level is directly measured using a tape from the top of the tank. Malfunctioning equipment is repaired promptly.

Each operating day at 04:00, tanks are checked at the sight gage by the operator and any difference with the computer reading is reported. The instrumentation department then proceeds to verify the calibration of the equipment. This operation sometimes requires performing a manual tape reading of the tank level. The manual tape reading is done by measuring the empty space between the roof and the actual tank level. The product level is then obtained by the difference. Tape readings are taken at the end of the month and also are taken by independent inspectors each time the tank is involved in product movement in or out of the refinery.

Tank levels are registered daily in a document entitled Daily Gage. This document shows any gain or loss of product in each tank. This report is analyzed and any inconsistent reading is brought to the attention of the Operations Department which then proceeds to investigate or verify the tank gage system.

All tank filling operations are monitored by at least two operators - one at the pumping location and one at the receiving location. The operators are in constant audible (via 2-way radio or telephone) or visual contact. In the event of a high level alarm during tank filling, or if the

operator has other cause to believe that overflow of a tank is possible, contact is made immediately to appropriate operators and pumping is ceased immediately.

4.3 Facility Transfer Operations

All raw material, intermediates and products are transferred throughout the CPR facility through a system of steel pipelines and associated pumping facilities. The vast majority of pipelines used for the transfer of hydrocarbon throughout the facility are above ground. However, sections of pipelines of limited length are routed underground near certain roadways, loading racks and pump stations. Figure 4-2 presents the location of major above ground piping systems at CPR. Figure 4-2 also provides the locations of major pump stations.

4.3.1 Underground Piping Installations

Except where passing through an earthen dike or in the few small sections near certain roadways, loading racks and pump station pipelines in hydrocarbon service are above ground and do not contact the ground. Those portions of a pipeline which are in direct contact with soil are provided with adequate corrosion protection to ensure metal integrity for safe and economical operation. All such pipes were installed with appropriate coatings in order to isolate the external surface of the piping from the environment. Selection and installation of coatings was consistent with best engineering practices and with the recommended practices of the National Association of Corrosion Engineers (NACE) Standard RP0169-83 ("Standard Recommended Practice: Control of External Corrosion on Underground or Submerged Metallic Piping Systems"). Whenever any section of a buried pipeline is exposed for any reason, it will be inspected by qualified facility personnel for deterioration of the coating or for corrosion of the pipe surface. If deterioration of coating or corrosion of pipe is detected, appropriate corrective measures will be initiated immediately.

4.3.2 Out of Service Piping

The following operational security procedures are implemented for transfer equipment in non-operating or non-standby status or in standby status for an extended period of time.

- Pipelines and loading and unloading connections are securely capped or blank-flanged.

- Master flow and drain valves and any other valves which may permit outward flow of a bulk storage tank's contents is securely locked in a closed position.

- Starter controls on all oil transfer pumps are located within the secured facility boundaries and are thus accessible only to authorized CPR personnel.

4.3.3 Pipe Support Design

All above ground pipe supports are designed to minimize abrasion and corrosion and allow for expansion and contraction. Materials of pipe support shoes, wearplates, protective sleeves and hangers are compatible with the steel piping. Interfaces between pipe support shoes and pipe supports are free to move with thermal expansion. Pipe supports were designed based on best engineering judgement and are consistent with applicable ANSI standards.

4.3.4 Pipeline Inspections

Inspections of oil transfer pipelines and valves are conducted at the CPR facility in order to detect any leaks or spills, or any condition which may result in leaks or spills, of oil or hazardous substances. Inspections are conducted by trained facility personnel experienced in the recognition of hazardous conditions. A full description of CPR's pipeline inspection program is presented in Chapter 5 of this plan.

4.3.5 Vehicular Accident Prevention

The CPR facility is designed and operated to minimize the potential for vehicular damage to above ground pipelines. The following safeguards have been implemented:

- Portions of above ground pipelines passing over facility roadways are elevated to a level well above the top of any vehicle that would be expected to enter the facility. Any vehicle that enters the facility which, due to its size, may damage overhead pipelines, will be verbally warned by the security guard at the main gate not to endanger overhead pipelines.

- Pipe supports are of reinforced concrete and/or steel construction which are capable of withstanding significant impacts from vehicles.

- Pipe supports are brightly painted to ensure that they are highly visible to vehicle operators.

4.4 Tank Truck Loading Areas

CPR operates three loading areas for the transfer of product to tanker trucks: the main loading rack (which handles gasoline and diesel); the asphalt loading rack (which handles asphalt, kerosene, fuel oil and residual fuel); and the LPG loading rack. The location of each of these loading racks is shown in Figure 4-3 and Plate 1. All loading racks are designed and operated in full conformance with applicable Department of Transportation requirements. Since there is no threat of a release of oil from the LPG loading rack, this facility will not be discussed further in this plan.

During normal refining operations, both the main loading rack and the asphalt loading rack are operated 24 hours a day, 7 days a week. On the average, 75 trucks are loaded per day at the gasoline loading rack and 10 to 15 trucks are loaded per day at the asphalt loading rack. Typically, tanker trucks arrive at the facility empty and are filled to maximum capacity. The capacity of the largest truck loaded at the main loading rack or the asphalt loading rack is approximately 10,000 gallons. A spill of oil from the gasoline loading rack or the asphalt loading rack will be limited to the volume of the largest compartment in the truck being loaded. This volume will not exceed 3,000 gallons at the main loading rack and 4,000 gallons at the asphalt loading rack.

The main loading rack includes a paved area for the parking of tank trucks during loading. A maximum of three tank trucks can be loaded simultaneously. The paved area is bermed and slopes toward a drainage system in order to collect any spilled material. The asphalt loading rack includes a concrete lined and curbed area for the parking of tank trucks during loading. A maximum of two tank trucks can be loaded simultaneously. The loading area is sloped toward a drainage system in order to collect any spilled material. The loading rack drainage systems discharge into CPR's Solids Knockout Pit (SKOP) which is part of CPR's process wastewater treatment system (see Section 2.3 for a further description of the system).

The SKOP and downstream units, including the API Separator, Corrugated Plate Interceptor, Equalization Tank, the IAF Unit and the biological treatment plant are capable of preventing oil from such a release from entering surface waters. In addition, response equipment, including vacuum truck, containment booms, sorbent material, etc., would be deployed immediately in order to expedite recovery of oil from the treatment plant. Further information on CPR's response capabilities are presented in Section 8 of this plan.

Tank truck loading procedures are in place to minimize the potential for releases of product during loading operations. These procedures are briefly described below:

- A warning sign is posted at the entrance to the loading racks, The sign provides instructions to ensure safe and environmentally sound loading of product, such as warnings against smoking and procedures for proper hookup of vents, hoses and grounds as well as inspection of the vehicle and ground surface for leaks. The sign is being upgraded to include the following warning against departure of trucks prior to disconnecting transfer lines: "Luego de Completar el Llenado, Desconecte Todas Las Mangas y el Sistema de Tierra" ("After Completion of Loading, Disconnect All Hoses and the Ground System").

- Upon arrival at the CPR gate, each driver is provided with a placard for placement on the dashboard. The placard states: "ADVERTENCIA: Favor de Verificar que Toda Manga este Apropiadamente Desconectada y Vacia Antes de Mover el Camion Fuera del Area" ("ATTENTION: Please Verify that all Hoses are Properly Disconnected and Empty Before Moving the Truck From the Area").

- CPR ensures that new drivers receive adequate on-the-job training and instructions from CPR's loading rack operator on procedures to minimize leaks and to ensure worker health and safety prior to participating in tank loading activities. At a minimum, drivers are trained to prevent premature departure from the loading rack and to inspect the lower-most drain and all outlets of the tanks prior to filling and departure of the tank truck.

- CPR maintains a full-time operator who oversees operations at the three loading racks. The operator is responsible for ensuring proper operation of the loading rack facilities and is fully trained in the recognition, prevention and response to spill situations.

4.5 Other Oil Handling Facilities

In addition to the bulk storage and transfer facilities described above, CPR manages oil in smaller quantities at various locations throughout the facility. All such facilities are designed and operated to minimize the potential for releases of oil to CPR's storm water collection system and to surface waters. The location of each unit is presented in Figure 4-3 and Plate 1. A description of each location is presented below.

4.5.1 Slop Oil Unloading Areas

CPR personnel collect oily water from various locations throughout the CPR facility as part of normal facility operation and maintenance. This material may originate from equipment repair and maintenance, tank cleaning, sewer cleaning, spill cleanups and related activities. Oily water is transported from the point of origin to CPR's wastewater treatment plant using vacuum trucks with a maximum capacity of 3,000 gallons. Oily water is typically discharged directly into the Solids Knockout Pit (SKOP) and is subsequently conveyed through CPR's wastewater treatment facility for proper treatment.

During discharge of oily water into the SKOP, vacuum trucks are parked in a concrete lined and bermed unloading area. A plan of the unloading area is presented in 4-4. Material is discharged into the inlet chamber of the SKOP through a flexible hose. Operators are trained in proper use of hose, hose connections and other equipment to minimize the potential for spills. Also, upon completion of discharge, the operator inspects the truck, hose connections and the concrete slab for any signs of leaks.

The unloading area is approximately 40 feet long by 20 feet wide and is contiguous with the main bay of the SKOP. The southern edge of the area is provided with a 3.5-inch high concrete curb. The northern edge of the area is provided with an 18-inch high concrete curb. An access ramp is provided at the western end of the area which prevents spilled material or precipitation from exiting the lined area. As shown on Figure 4-4, the concrete slab is sloped toward the main bay of the SKOP. Since there is no curbing in this area, any precipitation or spilled material will flow directly into the SKOP and will be prevented from impacting surrounding areas.

Vacuum trucks may also discharge watery oil into the forebay of the API Separator or into the slop oil sump, which is located adjacent to the western cell of the Separator. In such cases, the truck is parked in an unloading area along the western side of the API forebay. A plan of this area is presented in Figure 4-5. This area is also designed to prevent spilled material and precipitation from impacting surrounding areas. The reinforced concrete slab slopes toward the API forebay and the slop oil sump. A 25-foot long by 5-inch high concrete curb is provided along the western edge of the area. The slop oil tank earthen dike is situated along the northwestern edge of the area. Since there is no curbing along the API Separator or the slop oil sump, any precipitation or spilled material will flow directly into these units and will be prevented from impacting surrounding areas.

4.5.2 Vehicle Fueling Areas

CPR operates two tanks for fueling of company vehicles - an above ground diesel tank and an underground gasoline tank. Both tanks are located in the southeastern portion of the facility in the vicinity of the warehouse. The locations of these tanks are presented in Figure 4-3. Figure 4-6 shows the area of the two vehicle fueling areas in greater detail.

Tank T-001 is an above ground, horizontal steel tank with a capacity of 6,000 gallons. The tank is used for the storage of diesel fuel for company use. The tank is provided with a reinforced concrete secondary containment structure. Tanker trucks loading this tank, as well as company vehicles being refueled, park on Second Street adjacent to the tank. To operate the diesel fuel dispenser during vehicle refueling, the operator must manually depress the handle on the nozzle at all times. Release of the handle will cut off the flow of fuel. The nozzle is not equipped with a fitting to allow unattended operation. This procedure is intended to minimize the potential for releases of diesel fuel to the ground surface during vehicle refueling.

CPR's underground storage tank is used for the storage of gasoline for company vehicles. The tank is constructed of fiberglass reinforced plastic and has a capacity of 6,000 gallons. Tanker trucks loading this tank park on B Street adjacent to the tank. Company vehicles park on a concrete slab adjacent to the tank during refueling. Similar to the diesel fuel dispenser described above, the gasoline dispenser cannot be operated unattended, thereby minimizing the potential for releases of gasoline to the ground surface during vehicle refueling.

CPR has implemented engineering and management controls to contain any oil that may be released during tank filling operations caused by leaks or rupture of a tanker truck compartment. These controls are briefly summarized below:

- Prior to commencement of tank filling at either the UST or T-001, the tanker truck driver checks in with the guard at the Main Gate. The guard provides the driver with a placard which is to be placed on the windshield of the tanker truck. This placard warns the driver that he is not to depart after filling the tanks until all transfer lines are disconnected, inspected and properly secured. The guard then alerts a CPR operator who is dispatched to the area to coordinate tank filling. The driver is instructed not to commence tank filling until arrival of the operator.

- Upon arrival at the area, the CPR operator (1) places a temporary containment berm across the appropriate roadway and (2) manually closes the shut-off valve located in the storm water drainage channel downstream of the loading areas (see Figure 4-6). Spills or leaks that may occur during tank loading operations will be diverted into the storm water collection system due to the slopes of the roadways and the portable berm. The containment system created when the shut-off valve is closed has a capacity in excess of 20,000 gallons. The maximum volume of spilled oil would be 3,000 gallons of gasoline or 4,000 gallons of diesel fuel. The storm water collection system, which consists of in-ground concrete channels, earthen swales and underground pipes, normally discharges collected storm water into CPR's Storm Water Retention Pond. However, during tank filling operations, any oil that may enter the system will be fully contained by the closed shut-off valve until properly removed by vacuum truck or other appropriate means.

- Upon completion of tank filling, the driver will check all connections for leaks and will return the placard to the security guard. The CPR operator will remove the temporary berm from the roadway and will reopen the storm water shutoff valve only after inspecting the storm water channel for any traces of oil.

4.5.3 Pump Station Fuel Tanks

CPR operates two above ground diesel tanks for servicing various pumping equipment in the tank farm. The locations of the tanks are presented in Figure 4-3.

Diesel tank T-002 is a 2,000 gallon horizontal steel tank which rests atop a concrete slab and is surrounded by a steel platform. This tank is located in the Cummins pump station adjacent to Tank 603. Adequate secondary containment is provided by a concrete-lined floor surrounded by concrete and earthen dikes. The containment area also houses the diesel pumps and associated ancillary equipment. A catchment basin within the area conveys precipitation and spilled material to the process sewer. Loading of the tank is conducted by a single feed line from bulk storage tanks. The tank supplies diesel fuel to adjacent pump areas via an above ground feed line. There are no vehicles associated with loading or unloading this tank.

Diesel tank T-003 is a 3,000 gallon horizontal steel tank. This tank is located in the gasoline pump station adjacent to Tank 503. Adequate secondary containment is provided by a concrete floor and curbing which also houses associated ancillary equipment. A catchment basin within the area conveys precipitation and spilled material to the process sewer. Loading of the tank is conducted by a single feed line from bulk storage tanks. The tank supplies diesel fuel via above ground pipes to adjacent area pumps which handle gasoline distribution lines. There are no vehicles associated with loading or unloading this tank.

4.5.4 Container Storage Area

There are two container storage areas within the CPR premises. Bulk quantities of containerized lubricating oil are stored in CPR's container storage building which is located to the east of the Process Area, adjacent to Tank 551. Lube oil is stored in 55-gallon drums in this area. The container storage building is an enclosed structure with approximate dimensions of 62 feet by 28 feet. The building is provided with a concrete slab floor which is surrounded by a 6-inch high concrete curb. The location of the container storage area is presented in Figure 4-3 and Plate 1.

The second container storage building is the marketing warehouse which is located to the north of the Main Loading Rack. Bulk quantities of containerized hydraulic fluid and motor oil are stored in this building. The building consists of two rooms - an eastern room and a western room. Each of the rooms is described below:

- The eastern room is used for the storage of hydraulic fluid and motor oil in 55-gallon drums. The fully enclosed room is constructed of a reinforced concrete slab floor,

concrete block walls and a sheet metal roof. The dimensions of the room are approximately 54 ft by 80 ft. The concrete block walls are keyed into the concrete floor thereby preventing the discharge of spilled liquids from the building. The concrete slab floor is equipped with concrete channels which run the length of the eastern and western walls of the room. The channels slope in a northerly direction and terminate in sealed sumps located at the northen wall of the room. The combined capacity of the channels and sumps is approximately 200 gallons which exceeds the volume of the largest container stored within the room (55-gallons). The room is accessed by an overhead garage door located in the northern wall. A portable berm is placed across the doorway to prevent the release of any spilled material from the room.

- The western room is used for the storage of hydraulic fluid and motor oil in smaller, pre-packaged containers generally less than 5 gallons. The fully enclosed room is constructed of a reinforced concrete slab floor and sheet metal walls and roof. The dimensions of the room are approximately 164 ft by 80 ft. The sheet metal walls are continuously anchored to the concrete floor thereby preventing the discharge of spilled liquids from the building. The room is accessed by an overhead garage door located in the northern wall. A portable berm is placed across the doorway to prevent the release of any spilled material from the room.

4.5.5 Drum Oil Loading Area

CPR operates a motor and hydraulic oil loading area, which is located at the marketing warehouse premises (northwestern portion of the facility). The location of the area is presented in Figure 4-3. This loading area serves oil in 55-gallon drums.

Hydraulic and motor oil are stored in a 9,100 gallon cargo tank which is divided into four compartments:

- 1,300 gallons (motor oil)
- 2,400 gallons (motor oil)
- 2,700 gallons (motor oil)
- 2,700 gallons (hydraulic oil)

The tank is provided with a reinforced concrete secondary containment structure consisting of a concrete slab floor, continuous 12-inch high curbing and a sheet metal roof. Access into the containment system is by a ramp which allows vehicles to pass over the curbing. Secondary containment has a capacity of 6,000 gallons, representing more than enough capacity to contain 110% of the volume of the largest compartment (2,970 gallons). All loading operations are conducted within this containment system.

CPR has implemented control techniques and engineering and management practices to minimize the potential risks of an oil spill or, at least, to minimize the release of oil in the event of a spill or leak that may occur during filling of the tanks. These controls are briefly summarized below:

- The loading system is equipped with a pump meter (Smith Meters T-11, 150 psi, 100 gpm max, 20 gpm min). This instrument controls the amount of oil to be transferred, which minimizes risks of spills being caused by overfilling of products.

- CPR are always present during drum loading operations. These activities supervised and performed by a minimum of two persons, ensuring an immediate awareness response in case of any problem (accident, spills, drum leakage, hose rupture, etc.) In case there is a malfunction during the loading processes, operators will immediately shut down the pump and will make efforts to contain the spill. At the same time, they will contact the CPR emergency response personnel.

- Because of the small quantities of oil being transferred, worst case for this area is not expected to exceed 55-gallons (maximum amount of oil being transferred at a time). Oil will be contained within the secondary containment system until properly removed by vacuum truck or other appropriate means.

4.5.6 Transformers

A total of 27 transformers associated with the electrical distribution system at CPR are located throughout the CPR facility. Transformers contain oil in varying quantities based on the rating of the unit. Adequate secondary containment has been provided for each transformer. Twenty of the transformers are equipped with a secondary containment system consisting of a

reinforced concrete slab surrounded by minimum four-inch high continuous concrete curbs. One transformer is situated on a reinforced concrete slab and is surrounded by 4-inch thick sorbent boom. This transformer is scheduled for replacement at which time a concrete curb will be placed around the unit. Each of these secondary containment systems provides adequate capacity for the contents of the transformer as well as accumulated precipitation. Six of the transformers are situated within the process area which is underlain by a reinforced concrete slab and surrounded by a system of concrete curbs and in-ground concrete trenches to prevent spilled oil from impacting surrounding soil. Oil released within the process area is discharged into the process sewer system and is ultimately recovered in CPR's wastewater treatment plant (as described in Section 2.3 of this plan). Table 4-3 presents a list of all CPR transformers along with the respective transformer's location, oil volume and secondary containment capacity.

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5. INSPECTIONS AND RECORDS

Routine and detailed inspections of storage facilities and transfer pipelines are conducted at the CPR facility in order to detect any leaks or spills, or any condition which may result in leaks or spills, of oil or hazardous substances. Inspections are conducted by trained facility personnel experienced in the recognition of hazardous conditions. The inspection program includes, but is not limited to, tanks, pipelines and secondary containment systems.

Inspection reports are maintained by the Engineering Department to document the history of all equipment. Records of inspections will be maintained for a minimum of five years. Any observed spills or leaks of oil or hazardous substances or any conditions which may lead to a spill or leak are reported to the appropriate shift supervisor who in turn reports the situation to facility management. Corrective actions are implemented as necessary.

5.1 Tank System Inspection

Routine in-service tank system inspections are conducted by CPR personnel. The exterior of each tank shell as well as the tank foundation and appurtenant equipment (fittings, manways, etc.) are inspected for signs of leaks or conditions which may result in a leak, such as corrosion or deterioration. Piping systems associated with each tank (i.e., pipes located within respective containment areas), including flanges, valves, pumps, pipe supports and related elements, are also inspected for conditions which may result in a leak. CPR's inspection checklists for tank systems are presented in Appendix B. These checklists also serve as inspection logs. Specific items to inspect and problems to look for are included in the checklists. Tank system inspections are conducted on a monthly basis.

All storage tanks are also inspected on a daily basis. Operations personnel conduct a walk through and visual examination of tank systems for any evidence of a release of oil, including leaking tanks, valves or other equipment, standing pools of oil and stained soil. A copy of the checklist used by the operators during the daily inspections is presented in Appendix B.

In addition to the daily and monthly inspections described above, all portions of the CPR facility are monitored 24 hours a day, 7 days a week by appropriate operations personnel. Operators are also responsible for visually monitoring all material transfer operations and for

ensuring that good housekeeping practices are observed within the assigned area. Spills, leaks or any other condition which may result in a discharge of oil or hazardous substances would be noted by an operator. Potential spill problems are reported to the shift supervisor immediately. Security personnel are instructed to observe for leaks from tanks, pipelines and other equipment during their tours.

Shell thickness tests are conducted on a periodic basis using an ultrasonic testing equipment. The frequency of such testing is based on design and operating considerations as well as predicted and measured corrosion rates of the subject tank and/or similar tanks. Records of the shell thickness tests are kept to determine whether weaknesses in the shell are developing. Internal inspections of bulk storage tank floors and shells are also conducted as required. Intervals between internal inspections are determined based on design and operating considerations, evaluation of historical inspection records, measured or expected corrosion rates, and other factors. Hydrostatic testing of tanks and pipelines is conducted, as appropriate, prior to returning a tank or pipeline to service after major repairs or refurbishment.

5.2 Secondary Containment System Inspection

Monthly inspections of the storage tank secondary containment systems are conducted by CPR personnel. Secondary containment systems are visually inspected for proper operation and for any condition which may compromise the ability of the system to contain spilled materials, such as erosion or deterioration. CPR's secondary containment inspection checklist is presented in Appendix B. This checklist also serves as an inspection log. Items to inspect and problems to look for are included in the checklist.

5.3 Transfer Equipment Inspection

Routine in-service inspections of petroleum transfer equipment are conducted by CPR personnel. These inspections include pump areas, pipelines and ancillary conveyance equipment located outside of bulk storage tank secondary containment areas. (Those conveyance systems are inspected as part of tank system inspections as described in Section 5.1.) Inspections are conducted on a monthly basis.

CPR operates a number of pump areas throughout the facility. Each area includes one or more pumps and associated piping and is situated within a concrete lined and bermed pad. Storm water collected within each area is routed to CPR's wastewater treatment plant via the process sewer. Each pump area is inspected on a monthly basis for leaks, structural or operational deficiencies and other conditions which may result in a release of hydrocarbon. A checklist for conducting these inspections is presented in Appendix B. Specific areas to inspect and problems to look for are included in the checklists. CPR's pump areas are listed below and are shown in Figure 4-2.

- Fuel Oil Pump Area
- Fuel Oil Cummins Pump Area
- Gasoline Pump Area
- Jet Fuel Major Transfer Pump Area
- Gasoline and Diesel Cummins Pump Area
- Platformer Charge Pump Area
- Kerosene and Jet Fuel Pump Area
- Jet Fuel Transfer Pump Area
- Crude Charge Pump Area
- Asphalt Loading Rack Pump Area
- Tank 612 Asphalt Transfer Pump Area

Above ground pipe racks are inspected on a monthly basis. Pipes and associated equipment, including flanges, valves, pipe supports, etc., are inspected for leaks, corrosion or other conditions which may result in a release of hydrocarbon. The ground surface below overhead pipe racks in the process area is inspected for signs of leaks from above. A checklist for conducting these inspections is presented in Appendix B. Specific areas to inspect and problems to look for are included in the checklists. Major pipe systems subject to these inspections are listed below and are shown in Figure 4-2.

- Avenue D Pipe Rack
- Avenue C Pipe Rack
- Platform Charge Pump Pipe Rack
- Crude Charge Pump Pipe Rack
- Gasoline Pump Area Pipe Rack

- Process Area Overhead Pipe Racks
- Fuel Oil Transfer Pipe Rack
- Asphalt Loading Pipe Rack

All piping systems are also inspected on a daily basis. Operations personnel conduct a walk through and visual examination of piping systems for any evidence of a release of oil, including leaking valves, flanges and other fittings, standing pools of oil and stained soil. A copy of the checklist used by the operators during the daily inspections is presented in Appendix B.

As described above, in addition to daily and monthly inspections, all portions of the CPR facility are monitored 24 hours a day, 7 days a week by appropriate operations personnel. Spills, leaks or any other condition which may result in a discharge of oil or hazardous substances from pipelines, pump areas and other facilities, would be noted by an operator and would be reported to the shift supervisor immediately. Appropriate corrective actions would be implemented as necessary.

6. SECURITY

A security system has been implemented at the CPR facility which is designed to prevent accidental or intentional entry into the facility that could possibly result in a release of oil or hazardous substances. Protection measures against vandalism, theft, sabotage or other illegal or improper use of the plant facilities are in place as described below.

Artificial barriers - The entire CPR facility is surrounded by an 8-foot high chain-link fence. All gates are closed and locked if unattended.

Access control - The Main Gate to the CPR facility is located along the Southeastern section of the facility (see Figure 2-3). The Main Gate is provided with a guardhouse which is manned by a security guard 24 hours a day, seven days a week. An additional entrance gate for product dispatching trucks and site contractors is also controlled by the guard staff. The security guard controls pedestrian and vehicular access. Only CPR personnel and authorized visitors are permitted access to the facility. CPR employees must present proper identification badges. Visitors must sign in at the gate where they are given a temporary visitor pass. They are provided with full communication capability, including telephones for on-site and off-site communication as well as two-way radios capable of communicating with all other mobile units.

Routine security patrol - The CPR facility is routinely patrolled by a security guard 24 hours a day, 7 days a week. Patrols are conducted in a security vehicle or on foot. Guards are fully trained in recognition of any unauthorized personnel, vehicles or activities. The guard is also responsible for vehicular traffic control, as described below. In addition, security guards are instructed to observe any evidence of leaks or spills of oil or hazardous substances and to follow proper procedures in the event that a spill is detected. The guard is equipped with a two-way radio and cellular telephone capable of summoning on-site or off-site assistance if required.

Vehicular traffic control - Only authorized vehicles are permitted access to the CPR facility. Safe vehicle operation is required and is enforced by security personnel. The maximum speed limit at the facility is 10 miles per hour. Trucks are permitted on

designated routes only. Pipe rack supports are marked with highly visible paint to avoid accidental damage by vehicles.

Lighting - All areas of the facility are provided with lighting to permit 24-hour facility operations. Lighting is adequate to identify spills occurring during hours of darkness or to prevent spills from occurring due to acts of vandalism.

Locked equipment - The following operational security procedures are implemented for equipment in non-operating or non-standby status or in standby status for an extended period of time.

- Master flow and drain valves and any other valves which may permit outward flow of a bulk storage tank's contents is securely locked in a closed position.

- The starter control on all pumps not located in a site are accessible only to authorized personnel are locked in the off position.

- Pipelines and loading and unloading connections are securely capped or blank-flanged.

7. PERSONNEL TRAINING AND BRIEFINGS

CPR requires that all facility personnel involved in management of oil be fully trained in oil spill prevention and response as well as associated health and safety issues. Specific training requirements vary depending on an individual's responsibilities during normal operations and during an oil spill response. CPR also requires that all contractors involved in oil spill response be properly trained. In addition to the training program described below, CPR and spill response contractor personnel conduct routine spill response drills and exercises. These drills and exercises are described fully in CPR's OPA 90 Facility Response Plan.

CPR has designated the facility's Operations Manager as the person accountable for oil spill prevention. The Operations Manager is fully qualified to fulfill this role being familiar with all aspects of facility operations and fully trained in oil spill prevention and response procedures. The Operations Manager, who also serves as CPR's Qualified Individual in accordance with the facility's OPA 90 Facility Response Plan, reports directly to the Refinery Manager.

In-House Personnel

A description of type of training and a list of CPR personnel required to participate is provided below. CPR will maintain records of all training provided to staff for a period of three years.

- **In-house Spill Prevention and Response Meetings** - CPR Environmental and Safety management staff conducts periodic meetings and briefings on various topics relating to oil and hazardous substance management issues to ensure adequate understanding of the SPCC Plan and related procedures. Topics include hazardous substance management, discharge prevention, oil spill response, contingency planning, use of personal protective equipment, and other safety related issues. Such meetings highlight and describe known spill events, malfunctioning equipment and recently developed precautionary measures. A copy of CPR's spill prevention and response training log is presented in Appendix B. Typical handouts utilized at these meetings are presented in Appendix C. (Note that hand-out material is subject to change in order to ensure up-to-date subject matter at each meeting.) Meetings/briefings are held a minimum of once per year for all required personnel.

Required for:

- In-house Spill Team
- Dock Operators
- Tank Farm Operators
- Wastewater Treatment Plant Operators
- Shift Supervisors
- Dock Security Guards

- **OSHA 40-Hour Health and Safety Training** - This course is required for all personnel involved in oil and hazardous substance removal activity which may expose the worker to health hazards. The course emphasizes recognition of hazard, use of protective equipment, safe work practices, and safe use of engineered controls and equipment. All attendees are also required to take an 8-hour refresher course each year.

Required for:

- Qualified Individual
- Qualified Individual Alternates
- In-house spill team

- **On-the-job** - All CPR employees undergo on-the-job training as well as periodic in-house health and safety training. On-the-job training ensures that all personnel will operate and maintain equipment to prevent the discharge of oil and in compliance with applicable laws and regulations. On-the-job training also includes duties and responsibilities to be carried out in the event of a release of oil.

Spill Response Contractor Personnel

CPR requires that all outside spill response contractor personnel involved in response activities at CPR be fully trained. At a minimum, training includes HAZWOPER 40-hour (and up-to-date 8-hour annual refresher) health and safety training in accordance with 29 CFR 1910.120. Appropriate contractor personnel must also complete formal spill response training. CPR will require that all contract personnel demonstrate that this training requirement has been satisfied before being permitted to participate in response activities. The response contractor must provide documentation that response personnel are trained, at a minimum, in the following areas: oil containment; oil recovery methods and devices; equipment operation; shoreline cleanup and waste storage and disposal considerations.

8. OIL SPILL COUNTERMEASURES

CPR is fully prepared to respond to a release of oil or hazardous substance. CPR has developed a response plan in accordance with the requirements of 40 CFR 112.20. That plan, referred to as the "Onshore Oil Spill Facility Response Plan," is considered a companion document to this SPCC Plan. Revision 1.0 of the Onshore Oil Spill Facility Response Plan was submitted to EPA in August 1997. The Onshore Oil Spill Facility Response Plan provides detailed information regarding CPR's spill response capability, including in-house and contractor response personnel and equipment. The plan also describes response procedures to be carried out in the event of an actual or imminent spill in order to ensure the safety of personnel and the protection of surface waters and other sensitive environmental receptors.

Within the Onshore Oil Spill Facility Response Plan is a section entitled the "Emergency Response Action Plan." This plan consists of a collection of various sections of the Facility Response Plan. The objective of the Emergency Response Action Plan is to make key information easily accessible to response personnel in the event of an actual emergency or oil spill. The plan contains only as much information as is necessary to combat the spill and is arranged so response actions are not delayed. A copy of this Emergency Response Action Plan is included in this SPCC Plan as Appendix D. Information presented in the plan includes, but is not limited to, the following:

- Information on the emergency coordinator and alternates (referred to in the Facility Response Plan as "Qualified Individuals");
- An emergency notification phone list;
- A spill response notification form;
- A list of response equipment, including locations;
- Information on equipment testing and deployment;
- Information on CPR's and contractor's emergency response team;
- A facility evacuation plan;
- A description of immediate response actions to be taken in the event of a spill.

Table 4-1

Bulk Storage Tanks in Hydrocarbon Service

Caribbean Petroleum Refining LP
Bayamon, Puerto Rico

Tank No.	Capacity	
	gallons	barrels
T-404	1,218,000	29,000
T-405	1,218,000	29,000
T-406	3,360,000	80,000
T-407	3,360,000	80,000
T-455	210,000	5,000
T-408	3,360,000	80,000
T-409	2,268,000	54,000
T-410	2,268,000	54,000
T-411	3,360,000	80,000
T-504	3,402,000	81,000
T-605	1,260,000	30,000
T-402	2,310,000	55,000
T-403	2,310,000	55,000
T-451	504,000	12,000
T-452	504,000	12,000
T-453	1,050,000	25,000
T-454	1,050,000	25,000
T-482	420,000	10,000
T-501	2,310,000	55,000
T-502	2,310,000	55,000
T-503	2,310,000	55,000
T-551	210,000	5,000
T-552	210,000	5,000
T-601	2,814,000	67,000
T-682	42,000	1,000

Table 4-1

Bulk Storage Tanks in Hydrocarbon Service

Caribbean Petroleum Refining LP
Bayamon, Puerto Rico

Tank No.	Capacity	
	gallons	barrels
T-602	2,814,000	67,000
T-603	1,050,000	25,000
T-604	5,250,000	125,000
T-106	9,114,000	217,000
T-101	3,360,000	80,000
T-102	3,360,000	80,000
T-103	3,360,000	80,000
T-104	5,040,000	120,000
T-105	6,342,000	151,000
T-201	2,310,000	55,000
T-202	2,310,000	55,000
T-203	2,352,000	56,000
T-612	1,163,400	27,700
T-606	84,000	2,000
T-607	84,000	2,000
T-608	84,000	2,000
T-609	84,000	2,000
T-610	582,120	13,860
T-611	582,120	13,860
T-001	6,000	143
T-002	3,350	80
T-003	2,000	47
T-1000	21,000	500
T-1001	21,000	500
T-UST1	6,000	143

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FAX TRANSMITTAL

Date: 9-16-99.

To: MIKE HARENLSCH Fax:

From: H. Mulholland

Subject: CR2 - Spec Plan

Pages: 4

MESSAGE

Table 4-2

Bulk Storage Tanks in Hydrocarbon Service: Secondary Containment Capacity

Caribbean Petroleum Refining LP
Bayamon, Puerto Rico

Tank No.	Capacity (gallons)		Secondary Containment Capacity (gallons)[1]
	100%	110%	
T-404	1,218,000	1,339,800	1,617,000
T-405	1,218,000	1,339,800	1,617,000
T-406	3,360,000	3,696,000	>3,696,000 [2]
T-407	3,360,000	3,696,000	>3,696,000 [2]
T-455	210,000	231,000	237,720
T-408	3,360,000	3,696,000	>3,696,000[3]
T-409	2,268,000	2,494,800	4,335,660
T-410	2,268,000	2,494,800	4,335,660
T-411	3,360,000	3,696,000	>3,696,000[3]
T-504	3,402,000	3,742,200	4,335,660
T-605	1,260,000	1,386,000	1,396,080
T-402	2,310,000	2,541,000	3,298,680
T-403	2,310,000	2,541,000	3,298,680
T-451	504,000	554,400	678,720
T-452	504,000	554,400	678,720
T-453	1,050,000	1,155,000	1,163,400
T-454	1,050,000	1,155,000	1,163,400
T-482	420,000	462,000	1,617,000
T-501	2,310,000	2,541,000	3,643,200 [4]
T-502	2,310,000	2,541,000	3,643,200 [4]
T-503	2,310,000	2,541,000	3,298,680
T-551	210,000	231,000	>231,000 [5]
T-552	210,000	231,000	>231,000 [5]
T-601	2,814,000	3,095,400	3,643,200
T-682	42,000	46,200	54,180

Table 4-2

Bulk Storage Tanks in Hydrocarbon Service: Secondary Containment Capacity

Caribbean Petroleum Refining LP
Bayamon, Puerto Rico

Tank No.	Capacity (gallons)		Secondary Containment Capacity (gallons)[1]
	100%	110%	
T-602	2,814,000	3,095,400	3,643,200
T-603	1,050,000	1,155,000	7,140,000
T-604	5,250,000	5,775,000	7,140,000
T-106	9,114,000	10,025,400	10,075,800
T-101	3,360,000	3,696,000	4,746,000
T-102	3,360,000	3,696,000	4,746,000
T-103	3,360,000	3,696,000	4,746,000
T-104	5,040,000	5,504,400	>5,504,400 [6]
T-105	6,342,000	6,976,200	>6,976,200 [6]
T-201	2,310,000	2,541,000	3,088,680
T-202	2,310,000	2,541,000	3,088,680
T-203	2,352,000	2,587,200	3,088,680
T-612	1,163,400	1,279,740	1,133,100 [7]
T-606	84,000	92,400	429,000
T-607	84,000	92,400	429,000
T-608	84,000	92,400	429,000
T-609	84,000	92,400	429,000
T-610	582,120	640,342	429,000 [7]
T-611	582,120	640,342	429,000 [7]
T-001	6,000	6,600	6,700
T-002	3,350	3,685	>3,685 [8]
T-003	2,000	2,200	>2,200 [8]
T-1000	21,000	23,100	78,513
T-1001	21,000	23,100	78,513
UST1	6,000	--	--

Table 4-2

Bulk Storage Tanks in Hydrocarbon Service: Secondary Containment Capacity

Caribbean Petroleum Refining LP
Bayamon, Puerto Rico

Notes:

(1) Capacities of secondary containment systems are based on design information.

(2) 2,802,800 gallons would be contained in Tank 406/407 containment system. Excess (893,200 gallons) would flow by gravity over 5-ft high spillway in southern dike into Tank 404/405/482 containment area.

(3) 1,299,400 gallons would be contained in Tank 408/411 containment system. Excess (2,396,600 gallons) would flow by gravity over 3-ft high spillway in northern dike into Tank 409/410/504 containment area.

(4) Tank 501/502 containment system is connected to Tank 601/602 containment system by a 1.5 ft high spillway. The combined capacity of the containment system is 3,643,200 gallons.

(5) 146,800 gallons would be contained in Tank 551/552 containment system. Excess (84,200 gallons) would flow by gravity over a 1.5 ft high spillway in northern dike into Tank 451/452 containment system.

(6) 3,050,000 gallons would be contained in Tank 104/105 containment system. Excess (3,926,200 gallons) would flow by gravity over a 5-ft high spillway in the western dike into the Tank 103/102/101 containment system.

(7) Containment systems scheduled for upgrade to achieve required capacity.

(8) Containment area drains to process sewer. Spilled oil will be collected in WWTP oil recovery units.

Secondary Containment Systems for Transformers

Caribbean Petroleum Refining LP
Bayamon, Puerto Rico

Unit No.	Serial No.	Location	Oil Volume (gallons)	Secondary Containment (gallons)
1	PAT 0381-0102	Power Distribution Bldg	259	718
2	PAT 0381-0101	Power Distribution Bldg	259	718
3	245177	Tank 482	199	623
4	63685	Tank 605	71	93
5	PAT 4920	Cooling Tower No. 1	163	536
6	7012438	Cooling Tower No. 2	290	691
7	Siemens Allis	South of WWTP	309	1016
8	41162	Gulfiner/Platformer	229	732
9	3073923298	Gulfiner/Platformer	237	732
10	48038	Gas Concentration	100	522
11	48039	Gas Concentration	100	522
12	6991641	Crude Oil Area	445	592
13	R277977	West of CH6	144	212
14	68G6384	North of Laboratory	70	4620
15	95A410781	North of Laboratory	25	4620
16	75922	North of Laboratory	110	4620
17	867246-62	North of Laboratory	55	4620
18	M97C12962	North of Laboratory	17	4620
19	N531799 65 P	Machine Shop	94	582
20	PJP-97781	Main Bldg. Substation	1875	4620
21	PJP-97782	Main Bldg. Substation	1875	4620
22	TR-7652	On top of Precipitator	140	Note (1)

Secondary Containment Systems for Transformers

Caribbean Petroleum Refining LP
Bayamon, Puerto Rico

Unit No.	Serial No.	Location	Oil Volume (gallons)	Secondary Containment (gallons)
23	TR-7653	On top of Precipitator	140	Note (1)
24	81-975	Desalter, CV-6	60	Note (1)
25	81-974	Desalter, CV-6	60	Note (1)
26	82-226	Desalter, CV-10	180	Note (1)
27	82-262	Desalter, CV-10	180	Note (1)

(1) Transformer located within process area secondary containment system. Releases will be discharged to process sewer and will be recovered in wastewater treatment plant oil recovery units.

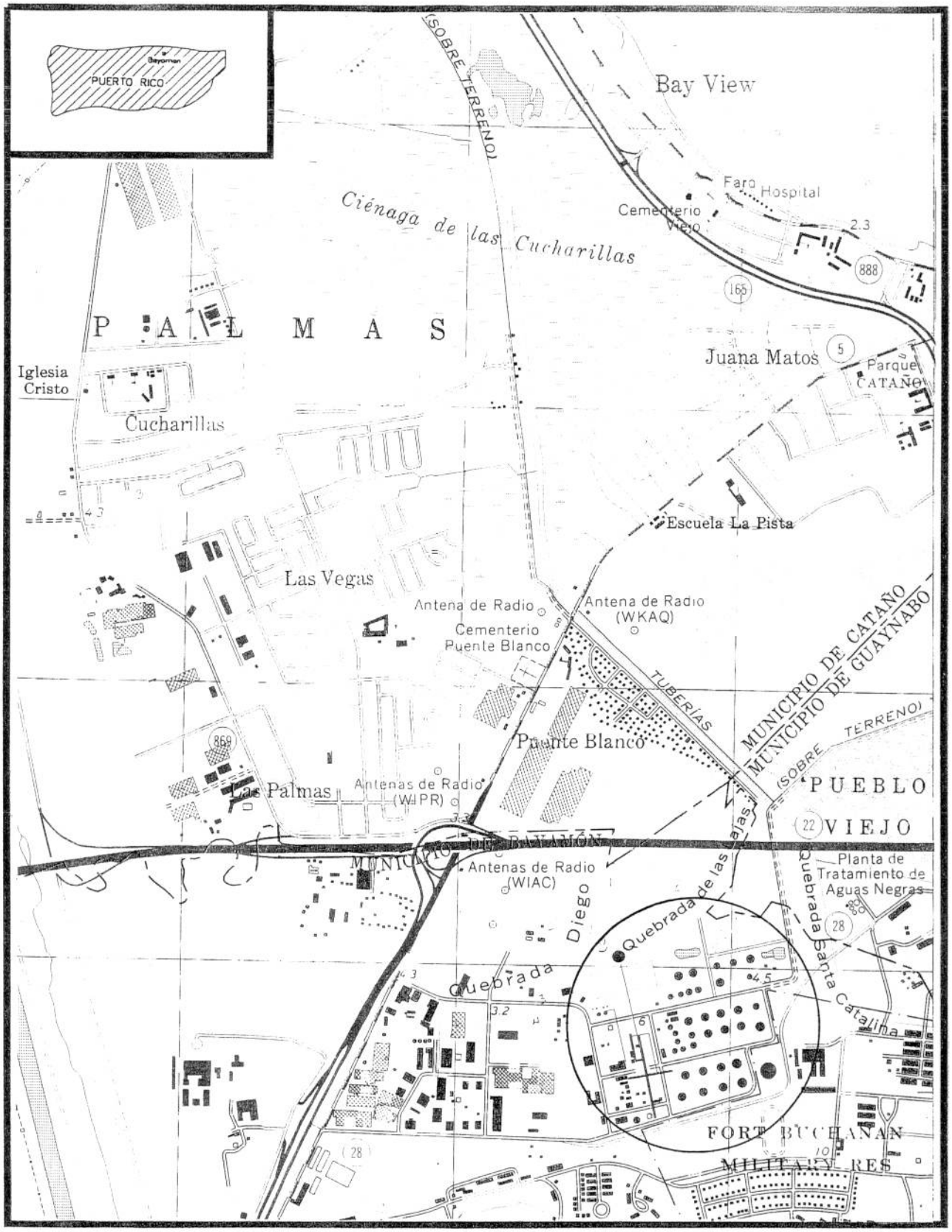

FIGURE 2--1

CPR FACILITY LOCATION, Bayamon, Puerto Rico

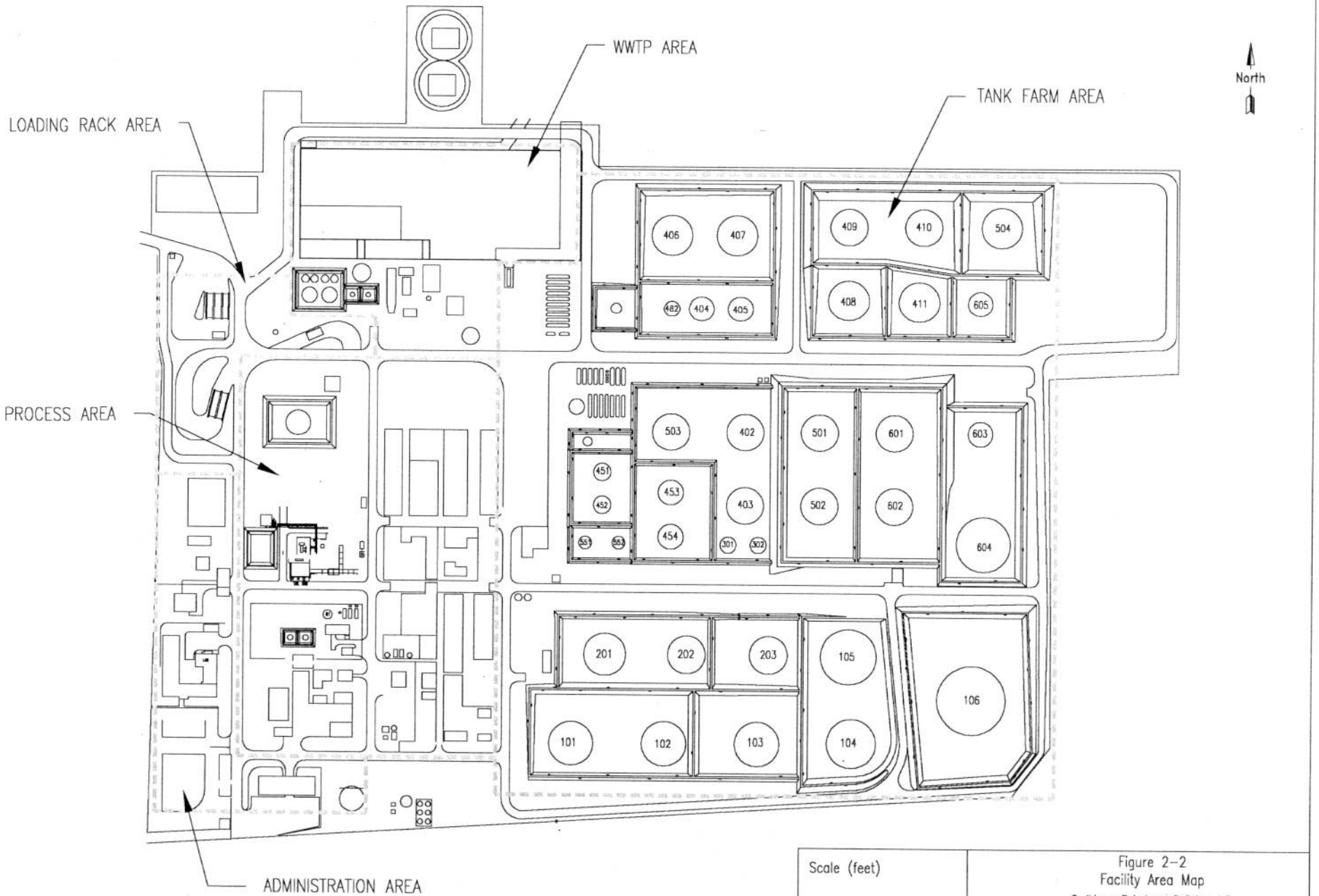

Figure 2-2
Facility Area Map
Caribbean Petroleum Refining, L.P.
Bayamon, Puerto Rico

Anderson-Mulholland & Associates, Inc.
White Plains, New York

September 1999

Appendix A

PART 110—DISCHARGE OF OIL

Sec.

AUTHORITY: Secs. 311 (b)(3) and (b)(4) and 501(a), Federal Water Pollution Control Act, as amended (33 U.S.C. 1321 (b)(3) and (b)(4) and 1361(a)); sec. 18(m)(3) of the Deepwater Port Act of 1974 (33 U.S.C. 1517(m)(3)); E.O. 11735, 38 FR 21243, 3 CFR Parts 1971-1975 Comp., p. 793.

SOURCE: 52 FR 10719, Apr. 2, 1987, unless otherwise noted.

§ 110.1 Definitions.

As used in this part, the following terms shall have the meaning indicated below:

Act means the Federal Water Pollution Control Act, as amended, 33 U.S.C. 1251 et seq., also known as the Clean Water Act;

Administrator means the Administrator of the Environmental Protection Agency (EPA);

Applicable water quality standards means State water quality standards adopted by the State pursuant to section 303 of the Act or promulgated by EPA pursuant to that section;

Contiguous zone means the entire zone established or to be established by the United States under article 24 of the Convention on the Territorial Sea and the Contiguous Zone;

Deepwater port means an offshore facility as defined in section (3)(10) of the Deepwater Port Act of 1974 (33 U.S.C. 1502(10));

Discharge, when used in relation to section 311 of the Act, includes, but is not limited to, any spilling, leaking, pumping, pouring, emitting, emptying, or dumping, but excludes (A) discharges in compliance with a permit under section 402 of the Act, (B) discharges resulting from circumstances identified and reviewed and made a part of the public record with respect to a permit issued or modified under section 402 of the Act, and subject to a condition in such permit, and (C) continuous or anticipated intermittent discharges from a point source, identified in a permit or permit application under section 402 of the Act, that are caused by events occurring within the scope of relevant operating or treatment systems;

MARPOL 73/78 means the International Convention for the Prevention of Pollution from Ships, 1973, as modified by the Protocol of 1978 relating thereto, Annex I, which regulates pollution from oil and which entered into force on October 2, 1983;

Navigable waters means the waters of the United States, including the territorial seas. The term includes:

(a) All waters that are currently used, were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters that are subject to the ebb and flow of the tide;

(b) Interstate waters, including interstate wetlands;

(c) All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, and wetlands, the use, degradation, or destruction of which would affect or could affect interstate or foreign commerce including any such waters:

(1) That are or could be used by interstate or foreign travelers for recreational or other purposes;

(2) From which fish or shellfish are or could be taken and sold in interstate or foreign commerce;

(3) That are used or could be used for industrial purposes by industries in interstate commerce;

(d) All impoundments of waters otherwise defined as navigable waters under this section;

(e) Tributaries of waters identified in paragraphs (a) through (d) of this section, including adjacent wetlands; and

(f) Wetlands adjacent to waters identified in paragraphs (a) through (e) of this section: Provided, That waste treatment systems (other than cooling ponds meeting the criteria of this paragraph) are not waters of the United States;

NPDES means National Pollutant Discharge Elimination System;

Offshore facility means any facility of any kind located in, on, or under any of the navigable waters of the United States, and any facility of any kind that is subject to the jurisdiction of the United States and is located in, on, or under any other waters, other than a vessel or a public vessel;

Oil, when used in relation to section 311 of the Act, means oil of any kind or in any form, including, but not limted to, petroleum, fuel oil, sludge, oil refuse, and oil mixed with wastes other than dredged spoil. *Oil*, when used in relation to section 18(m)(3) of the Deepwater Port Act of 1974, has the meaning provided in section 3(14) of the Deepwater Port Act of 1974;

Onshore facility means any facility (including, but not limited to, motor vehicles and rolling stock) of any kind located in, on, or under any land within the United States, other than submerged land;

Person includes an individual, firm, corporation, association, and a partnership;

Public vessel means a vessel owned or bareboat chartered and operated by the United States, or by a State or political subdivision thereof, or by a for-

eign nation, except when such vessel is engaged in commerce;

Sheen means an iridescent appearance on the surface of water;

Sludge means an aggregate of oil or oil and other matter of any kind in any form other than dredged spoil having a combined specific gravity equivalent to or greater than water;

United States means the States, the District of Columbia, the Commonwealth of Puerto Rico, Guam, American Samoa, the Virgin Islands, and the Trust Territory of the Pacific Islands;

Vessel means every description of watercraft or other artificial contrivance used, or capable of being used, as a means of transportation on water other than a public vessel; and

Wetlands means those areas that are inundated or saturated by surface or ground water at a frequency or duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include playa lakes, swamps, marshes, bogs and similar areas such as sloughs, prairie potholes, wet meadows, prairie river overflows, mudflats, and natural ponds.

§ 110.2 Applicability.

The regulations of this part apply to the discharge of oil prohibited by section 311(b)(3) of the Act. This includes certain discharges into or upon the navigable waters of the United States or adjoining shorelines or into or upon the waters of the contiguous zone, or in connection with activities under the Outer Continental Shelf Lands Act or the Deepwater Port Act of 1974, or that may affect natural resources belonging to, appertaining to, or under the exclusive management authority of the United States (including resources under the Magnuson Fishery Conservation and Management Act). The regulations of this part also define the term "discharge" for purposes of section 18(m)(3) of the Deepwater Port Act of 1974, as provided under § 110.11 of this part.

§ 110.3 Discharge into navigable waters of such quantities as may be harmful.

For purposes of section 311(b) of the Act, discharges of oil into or upon the navigable waters of the United States or adjoining shorelines in such quantities that it has been determined may be harmful to the public health or welfare of the United States, except as provided in § 110.7 of this part, include discharges of oil that:

(a) Violate applicable water quality standards, or

(b) Cause a film or sheen upon or discoloration of the surface of the water or adjoining shorelines or cause a sludge or emulsion to be deposited beneath the surface of the water or upon adjoining shorelines.

§ 110.4 Discharge into contiguous zone of such quantities as may be harmful.

For purposes of section 311(b) of the Act, discharges of oil into or upon the waters of the contiguous zone in such quantities that it has been determined may be harmful to the public health or welfare of the United States, except as provided in § 110.7, include discharges of oil that:

(a) Violate applicable water quality standards, or

(b) Cause a film or sheen upon or discoloration of the surface of the water or adjoining shorelines or cause a sludge or emulsion to be deposited beneath the surface of the water or upon adjoining shorelines.

§ 110.5 Discharge beyond contiguous zone of such quantities as may be harmful.

For purposes of section 311(b) of the Act, discharges of oil into or upon waters seaward of the contiguous zone in connection with activities under the Outer Continental Shelf Lands Act or the Deepwater Port Act of 1974, or that may affect natural resources belonging to, appertaining to, or under the exclusive management authority of the United States (including resources under the Magnuson Fishery Conservation and Management Act) in such quantities that it has been determined may be harmful to the public health or welfare of the United States, except as provided in § 110.7, include discharges of oil that:

(a) Violate applicable water quality standards, or

(b) Cause a film or sheen upon or discoloration of the surface of the water or adjoining shorelines or cause a sludge or emulsion to be deposited beneath the surface of the water or upon adjoining shorelines.

§ 110.6 Discharge prohibited.

As provided in section 311(b)(3) of the Act, no person shall discharge or cause or permit to be discharged into or upon the navigable waters of the United States or adjoining shorelines or into or upon the waters of the contiguous zone or into or upon waters seaward of the contiguous zone in connection with activities under the Outer Continental Shelf Lands Act or the Deepwater Port Act of 1974, or that may affect natural resources belonging to, appertaining to, or under the exclusive management authority of the United States (including resources under the Magnuson Fishery Conservation and Management Act) any oil in such quantities as may be harmful as determined in §§ 110.3, 110.4, and 110.5, except as the same may be permitted in the contiguous zone and seaward under MARPOL 73/78, Annex I, as provided in 33 CFR 151.09.

§ 110.7 Exception for vessel engines.

For purposes of section 311(b) of the Act, discharges of oil from a properly

functioning vessel engine are not deemed to be harmful, but discharges of such oil accumulated in a vessel's bilges shall not be so exempt.

§ 110.8 Dispersants.

Addition of dispersants or emulsifiers to oil to be discharged that would circumvent the provisions of this part is prohibited.

§ 110.9 Demonstration projects.

Notwithstanding any other provisions of this part, the Administrator may permit the discharge of oil, under section 311 of the Act, in connection with research, demonstration projects, or studies relating to the prevention, control, or abatement of oil pollution.

§ 110.10 Notice.

Any person in charge of a vessel or of an onshore or offshore facility shall, as soon as he or she has knowledge of any discharge of oil from such vessel or facility in violation of § 110.6, immediately notify the National Response Center (NRC) (800–424–8802; in the Washington, DC metropolitan area, 426–2675). If direct reporting to the NRC is not practicable, reports may be made to the Coast Guard or EPA predesignated On-Scene Coordinator (OSC) for the geographic area where the discharge occurs. All such reports shall be promptly relayed to the NRC. If it is not possible to notify the NRC or the predesignated OCS immediately, reports may be made immediately to the nearest Coast Guard unit, provided that the person in charge of the vessel or onshore or offshore facility notifies the NRC as soon as possible. The reports shall be made in accordance with such procedures as the Secretary of Transportation may prescribe. The procedures for such notice are set forth in U.S. Coast Guard regulations, 33 CFR part 153, subpart B and in the National Oil and Hazardous Substances Pollution Contingency Plan, 40 CFR part 300, subpart E. (Approved by the Office of Management and Budget under the control number 2050–0046)

§ 110.11 Discharge at deepwater ports.

(a) Except as provided in paragraph (b) below, for purposes of section 18(m)(3) of the Deepwater Port Act of 1974, the term "discharge" shall include but not be limited to, any spilling, leaking, pumping, pouring, emitting, emptying, or dumping into the marine environment of quantities of oil that:

(1) Violate applicable water quality standards, or

(2) Cause a film or sheen upon or discoloration of the surface of the water or adjoining shorelines or cause a sludge or emulsion to be deposited beneath the surface of the water or upon adjoining shorelines.

(b) For purposes of section 18(m)(3) of the Deepwater Port Act of 1974, the term "discharge" excludes:

(1) Discharges of oil from a properly functioning vessel engine, (including an engine on a public vessel), but not discharges of such oil accumulated in a vessel's bilges (unless in compliance with MARPOL 73/78, Annex I); and

(2) Discharges of oil permitted under MARPOL 73/78, Annex I.

PART 112—OIL POLLUTION PREVENTION

AUTHORITY: Secs. 311(j)(1)(C), 311(j)(2), 501(a), Federal Water Pollution Control Act (sec. 2, Pub. L. 92-500, 86 Stat. 816 et seq. (33 U.S.C. 1251 et seq.)); sec. 4(b), Pub. L. 92-500, 86 Stat. 897; 5 U.S.C. Reorg. Plan of 1970 No. 3 (1970), 35 FR 15623, 3 CFR 1966-1970 Comp.; E.O. 11735, 38 FR 21243, 3 CFR.

SOURCE: 38 FR 34165, Dec. 11, 1973, unless otherwise noted.

§ 112.1 General applicability.

(a) This part establishes procedures, methods and equipment and other requirements for equipment to prevent the discharge of oil from non-transportation-related onshore and offshore facilities into or upon the navigable waters of the United States or adjoining shorelines.

(b) Except as provided in paragraph (d) of this section, this part applies to owners or operators of non-transportation-related onshore and offshore facilities engaged in drilling, producing, gathering, storing, processing, refining, transferring, distributing or consuming oil and oil products, and which, due to their location, could reasonably be expected to discharge oil in harmful quantities, as defined in part 110 of this chapter, into or upon the navigable waters of the United States or adjoining shorelines.

(c) As provided in section 313 (86 Stat. 875) departments, agencies, and instrumentalities of the Federal government are subject to these regulations to the same extent as any person, except for the provisions of § 112.6.

(d) This part does not apply to:

(1) Facilities, equipment or operations which are not subject to the jurisdiction of the Environmental Protection Agency, as follows:

(i) Onshore and offshore facilities, which, due to their location, could not reasonably be expected to discharge oil into or upon the navigable waters of the United States or adjoining shorelines. This determination shall be based solely upon a consideration of the geographical, locational aspects of the facility (such as proximity to navigable waters or adjoining shorelines, land contour, drainage, etc.) and shall exclude consideration of man-made features such as dikes, equipment or other structures which may serve to restrain, hinder, contain, or otherwise prevent a discharge of oil from reaching navigable waters of the United States or adjoining shorelines; and

(ii) Equipment or operations of vessels or transportation-related onshore and offshore facilities which are subject to authority and control of the Department of Transportation, as defined in the Memorandum of Understanding between the Secretary of Transportation and the Administrator of the Environmental Protection Agency, dated November 24, 1971, 36 FR 24000.

(2) Those facilities which, although otherwise subject to the jurisdiction of the Environmental Protection Agency, meet both of the following requirements:

(i) The underground buried storage capacity of the facility is 42,000 gallons or less of oil, and

(ii) The storage capacity, which is not buried, of the facility is 1,320 gallons or less of oil, provided no single container has a capacity in excess of 660 gallons.

(e) This part provides for the preparation and implementation of Spill Prevention Control and Countermeasure Plans prepared in accordance with § 112.7, designed to complement existing laws, regulations, rules, standards, policies and procedures pertaining to safety standards, fire prevention and pollution prevention rules, so as to form a comprehensive balanced Federal/State spill prevention program to minimize the potential for oil discharges. Compliance with this part does not in any way relieve the owner or operator of an onshore or an offshore facility from compliance with other Federal, State or local laws.

[38 FR 34165, Dec. 11, 1973, as amended at 41 FR 12657, Mar. 26, 1976]

§ 112.2 Definitions.

For the purposes of this part:

(a) *Oil* means oil of any kind or in any form, including, but not limited to petroleum, fuel oil, sludge, oil refuse and oil mixed with wastes other than dredged spoil.

(b) *Discharge* includes but is not limited to, any spilling, leaking, pumping, pouring, emitting, emptying or dumping. For purposes of this part, the term *discharge* shall not include any discharge of oil which is authorized by a permit issued pursuant to section 13 of the River and Harbor Act of 1899 (30 Stat. 1121, 33 U.S.C. 407), or sections 402 or 405 of the FWPCA Amendments of 1972 (86 Stat. 816 et seq., 33 U.S.C. 1251 et seq.).

(c) *Onshore facility* means any facili-

ty of any kind located in, on, or under any land within the United States, other than submerged lands, which is not a transportation-related facility.

(d) *Offshore facility* means any facility of any kind located in, on, or under any of the navigable waters of the United States, which is not a transportation-related facility.

(e) *Owner or operator* means any person owning or operating an onshore facility or an offshore facility, and in the case of any abandoned offshore facility, the person who owned or operated such facility immediately prior to such abandonment.

(f) *Person* includes an individual, firm, corporation, association, and a partnership.

(g) *Regional Administrator*, means the Regional Administrator of the Environmental Protection Agency, or his designee, in and for the Region in which the facility is located.

(h) *Transportation-related* and *non-transportation-related* as applied to an onshore or offshore facility, are defined in the Memorandum of Understanding between the Secretary of Transportation and the Administrator of the Environmental Protection Agency, dated November 24, 1971, 36 FR 24080.

(i) *Spill event* means a discharge of oil into or upon the navigable waters of the United States or adjoining shorelines in harmful quantities, as defined at 40 CFR part 110.

(j) *United States* means the States, the District of Columbia, the Commonwealth of Puerto Rico, the Canal Zone, Guam, American Samoa, the Virgin Islands, and the Trust Territory of the Pacific Islands.

(k) The term *navigable waters* of the United States means *navigable waters* as defined in section 502(7) of the FWPCA, and includes:

(1) All navigable waters of the United States, as defined in judicial decisions prior to passage of the 1972 Amendments to the FWPCA (Pub. L. 92-500), and tributaries of such waters;

(2) Interstate waters;

(3) Intrastate lakes, rivers, and streams which are utilized by interstate travelers for recreational or other purposes; and

(4) Intrastate lakes, rivers, and streams from which fish or shellfish are taken and sold in interstate commerce.

(l) *Vessel* means every description of watercraft or other artificial contrivance used, or capable of being used as a means of transportation on water, other than a public vessel.

§ 112.3 Requirements for preparation and implementation of Spill Prevention Control and Countermeasure Plans.

(a) Owners or operators of onshore and offshore facilities in operation on or before the effective date of this part that have discharged or, due to their location, could reasonably be expected to discharge oil in harmful quantities, as defined in 40 CFR part 110, into or upon the navigable waters of the United States or adjoining shorelines, shall prepare a Spill Prevention Control and Countermeasure Plan (hereinafter "SPCC Plan"), in writing and in accordance with § 112.7. Except as provided for in paragraph (f) of this section, such SPCC Plan shall be prepared within six months after the effective date of this part and shall be fully implemented as soon as possible, but not later than one year after the effective date of this part.

(b) Owners or operators of onshore and offshore facilities that become operational after the effective date of this part, and that have discharged or could reasonably be expected to discharge oil in harmful quantities, as defined in 40 CFR part 110, into or upon the navigable waters of the United States or adjoining shorelines, shall prepare an SPCC Plan in accordance with § 112.7. Except as provided for in paragraph (f) of this section, such SPCC Plan shall be prepared within six months after the date such facility begins operations and shall be fully implemented as soon as possible, but not later than one year after such facility begins operations.

(c) Owners or operators of onshore and offshore mobile or portable facilities, such as onshore drilling or workover rigs, barge mounted offshore drilling or workover rigs, and portable fueling facilities shall prepare and implement an SPCC Plan as required by paragraphs (a), (b) and (d) of this section. The owners or operators of such facility need not prepare a new SPCC Plan each time the facility is moved to a new site. The SPCC Plan may be a general plan, prepared in accordance with § 112.7, using good engineering practice. When the mobile or portable facility is moved, it must be located and installed using the spill prevention practices outlined in the SPCC Plan for the facility. No mobile or portable facility subject to this regulation shall operate unless the SPCC Plan has been implemented. The SPCC Plan shall only apply while the facility is in a fixed (non-transportation) operating mode.

(d) No SPCC Plan shall be effective to satisfy the requirements of this part unless it has been reviewed by a Registered Professional Engineer and certified to by such Professional Engineer. By means of this certification the engineer, having examined the facility and being familiar with the provisions of this part, shall attest that the SPCC Plan has been prepared in accordance with good engineering practices. Such certification shall in no way relieve the owner or operator of an onshore or offshore facility of

his duty to prepare and fully implement such Plan in accordance with § 112.7, as required by paragraphs (a), (b) and (c) of this section.

(e) Owners or operators of a facility for which an SPCC Plan is required pursuant to paragraph (a), (b) or (c) of this section shall maintain a complete copy of the Plan at such facility if the facility is normally attended at least 8 hours per day, or at the nearest field office if the facility is not so attended, and shall make such Plan available to the Regional Administrator for on-site review during normal working hours.

(f) Extensions of time.

(1) The Regional Administrator may authorize an extension of time for the preparation and full implementation of an SPCC Plan beyond the time permitted for the preparation and implementation of an SPCC Plan pursuant to paragraph (a), (b) or (c) of this section where he finds that the owner or operator of a facility subject to paragraphs (a), (b) or (c) of this section cannot fully comply with the requirements of this part as a result of either nonavailability of qualified personnel, or delays in construction or equipment delivery beyond the control and without the fault of such owner or operator or their respective agents or employees.

(2) Any owner or operator seeking an extension of time pursuant to paragraph (f)(1) of this section may submit a letter of request to the Regional Administrator. Such letter shall include:

(i) A complete copy of the SPCC Plan, if completed;

(ii) A full explanation of the cause for any such delay and the specific aspects of the SPCC Plan affected by the delay;

(iii) A full discussion of actions being taken or contemplated to minimize or mitigate such delay;

(iv) A proposed time schedule for the implementation of any corrective actions being taken or contemplated, including interim dates for completion of tests or studies, installation and operation of any necessary equipment or other preventive measures.

In addition, such owner or operator may present additional oral or written statements in support of his letter of request.

(3) The submission of a letter of request for extension of time pursuant to paragraph (f)(2) of this section shall in no way relieve the owner or operator from his obligation to comply with the requirements of § 112.3 (a), (b) or (c). Where an extension of time is authorized by the Regional Administrator for particular equipment or other specific aspects of the SPCC Plan, such extension shall in no way affect the owner's or operator's obligation to comply with the requirements of § 112.3 (a), (b) or (c) with respect to other equipment or other specific aspects of the SPCC Plan for which an extension of time has not been expressly authorized.

[38 FR 34165, Dec. 11, 1973, as amended at 41 FR 12657, Mar. 26, 1976]

§ 112.4 Amendment of SPCC Plans by Regional Administrator.

(a) Notwithstanding compliance with § 112.3, whenever a facility subject to § 112.3 (a), (b) or (c) has: Discharged more than 1,000 U.S. gallons of oil into or upon the navigable waters of the United States or adjoining shorelines in a single spill event, or discharged oil in harmful quantities, as defined in 40 CFR part 110, into or upon the navigable waters of the United States or adjoining shorelines in two spill events, reportable under section 311(b)(5) of the FWPCA, occurring within any twelve month period, the owner or operator of such facility shall submit to the Regional Administrator, within 60 days from the time such facility becomes subject to this section, the following:

(1) Name of the facility;

(2) Name(s) of the owner or operator of the facility;

(3) Location of the facility;

(4) Date and year of initial facility operation;

(5) Maximum storage or handling capacity of the facility and normal daily throughput;

(6) Description of the facility, including maps, flow diagrams, and topographical maps;

(7) A complete copy of the SPCC Plan with any amendments;

(8) The cause(s) of such spill, including a failure analysis of system or subsystem in which the failure occurred;

(9) The corrective actions and/or countermeasures taken, including an adequate description of equipment repairs and/or replacements;

(10) Additional preventive measures taken or contemplated to minimize the possibility of recurrence;

(11) Such other information as the Regional Administrator may reasonably require pertinent to the Plan or spill event.

(b) Section 112.4 shall not apply until the expiration of the time permitted for the preparation and implementation of an SPCC Plan pursuant to § 112.3 (a), (b), (c) and (f).

(c) A complete copy of all information provided to the Regional Administrator pursuant to paragraph (a) of this section shall be sent at the same time to the State agency in charge of water pollution control activities in and for the State in which the facility is located. Upon receipt of such information such State agency may conduct a review and make recommendations to the Regional Administrator as to further procedures, methods, equipment and other requirements for equipment necessary to prevent and to contain discharges of oil from such fa-

cility.

(d) After review of the SPCC Plan for a facility subject to paragraph (a) of this section, together with all other information submitted by the owner or operator of such facility, and by the State agency under paragraph (c) of this section, the Regional Administrator may require the owner or operator of such facility to amend the SPCC Plan if he finds that the Plan does not meet the requirements of this part or that the amendment of the Plan is necessary to prevent and to contain discharges of oil from such facility.

(e) When the Regional Administrator proposes to require an amendment to the SPCC Plan, he shall notify the facility operator by certified mail addressed to, or by personal delivery to, the facility owner or operator, that he proposes to require an amendment to the Plan, and shall specify the terms of such amendment. If the facility owner or operator is a corporation, a copy of such notice shall also be mailed to the registered agent, if any, of such corporation in the State where such facility is located. Within 30 days from receipt of such notice, the facility owner or operator may submit written information, views, and arguments on the amendment. After considering all relevant material presented, the Regional Administrator shall notify the facility owner or operator of any amendment required or shall rescind the notice. The amendment required by the Regional Administrator shall become part of the Plan 30 days after such notice, unless the Regional Administrator, for good cause, shall specify another effective date. The owner or operator of the facility shall implement the amendment of the Plan as soon as possible, but not later than six months after the amendment becomes part of the Plan, unless the Regional Administrator specifies another date.

(f) An owner or operator may appeal a decision made by the Regional Administrator requiring an amendment to an SPCC Plan. The appeal shall be made to the Administrator of the United States Environmental Protection Agency and must be made in writing within 30 days of receipt of the notice from the Regional Administrator requiring the amendment. A complete copy of the appeal must be sent to the Regional Administrator at the time the appeal is made. The appeal shall contain a clear and concise statement of the issues and points of fact in the case. It may also contain additional information from the owner or operator, or from any other person. The Administrator or his designee may request additional information from the owner or operator, or from any other person. The Administrator or his designee shall render a decision within 60 days of receiving the appeal and shall notify the owner or operator of his decision.

[38 FR 34165, Dec. 11, 1973, as amended at 41 FR 12658, Mar. 26, 1976]

§ 112.5 Amendment of Spill Prevention Control and Countermeasure Plans by owners or operators.

(a) Owners or operators of facilities subject to § 112.3 (a), (b) or (c) shall amend the SPCC Plan for such facility in accordance with § 112.7 whenever there is a change in facility design, construction, operation or maintenance which materially affects the facility's potential for the discharge of oil into or upon the navigable waters of the United States or adjoining shore lines. Such amendments shall be fully implemented as soon as possible, but not later than six months after such change occurs.

(b) Notwithstanding compliance with paragraph (a) of this section, owners and operators of facilities subject to § 112.3 (a), (b) or (c) shall complete a review and evaluation of the SPCC Plan at least once every three years from the date such facility becomes subject to this part. As a result of this review and evaluation, the owner or operator shall amend the SPCC Plan within six months of the review to include more effective prevention and control technology if: (1) Such technology will significantly reduce the likelihood of a spill event from the facility, and (2) if such technology has been field-proven at the time of the review.

(c) No amendment to an SPCC Plan shall be effective to satisfy the requirements of this section unless it has been certified by a Professional Engineer in accordance with § 112.3(d).

§ 112.6 Civil penalties for violation of oil pollution prevention regulations.

Owners or operators of facilities subject to § 112.3 (a), (b) or (c) who violate the requirements of this part 112 by failing or refusing to comply with any of the provisions of § 112.3, § 112.4 or § 112.5 shall be liable for a civil penalty of not more than $5,000 for each day such violation continues. Civil penalties shall be imposed in accordance with procedures set out in part 114 of this subchapter D.

(Secs. 311(j), 501(a), Pub. L. 92-500, 86 Stat. 868, 885 (33 U.S.C. 1321(j), 1361(a)))

[39 FR 31602, Aug. 29, 1974]

§ 112.7 Guidelines for the preparation and implementation of a Spill Prevention Control and Countermeasure Plan.

The SPCC Plan shall be a carefully thought-out plan, prepared in accordance with good engineering practices, and which has the full approval of management at a level with authority to commit the necessary resources. If the plan calls for additional facilities

or procedures, methods, or equipment not yet fully operational, these items should be discussed in separate paragraphs, and the details of installation and operational start-up should be explained separately. The complete SPCC Plan shall follow the sequence outlined below, and include a discussion of the facility's conformance with the appropriate guidelines listed:

(a) A facility which has experienced one or more spill events within twelve months prior to the effective date of this part should include a written description of each such spill, corrective action taken and plans for preventing recurrence.

(b) Where experience indicates a reasonable potential for equipment failure (such as tank overflow, rupture, or leakage), the plan should include a prediction of the direction, rate of flow, and total quantity of oil which could be discharged from the facility as a result of each major type of failure.

(c) Appropriate containment and/or diversionary structures or equipment to prevent discharged oil from reaching a navigable water course should be provided. One of the following preventive systems or its equivalent should be used as a minimum:

(1) Onshore facilities:

(i) Dikes, berms or retaining walls sufficiently impervious to contain spilled oil;

(ii) Curbing;

(iii) Culverting, gutters or other drainage systems;

(iv) Weirs, booms or other barriers;

(v) Spill diversion ponds;

(vi) Retention ponds;

(vii) Sorbent materials.

(2) Offshore facilities:

(i) Curbing, drip pans;

(ii) Sumps and collection systems.

(d) When it is determined that the installation of structures or equipment listed in § 112.7(c) to prevent discharged oil from reaching the navigable waters is not practicable from any onshore or offshore facility, the owner or operator should clearly demonstrate such impracticability and provide the following:

(1) A strong oil spill contingency plan following the provision of 40 CFR part 109.

(2) A written commitment of manpower, equipment and materials required to expeditiously control and remove any harmful quantity of oil discharged.

(e) In addition to the minimal prevention standards listed under § 112.7(c), sections of the Plan should include a complete discussion of conformance with the following applicable guidelines, other effective spill prevention and containment procedures (or, if more stringent, with State rules, regulations and guidelines):

(1) *Facility drainage (onshore); (excluding production facilities).* (i) Drainage from diked storage areas should be restrained by valves or other positive means to prevent a spill or other excessive leakage of oil into the drainage system or inplant effluent treatment system, except where plan systems are designed to handle such leakage. Diked areas may be emptied by pumps or ejectors; however, these should be manually activated and the condition of the accumulation should be examined before starting to be sure no oil will be discharged into the water.

(ii) Flapper-type drain valves should not be used to drain diked areas. Valves used for the drainage of diked areas should, as far as practical, be of manual, open-and-closed design. When plant drainage drains directly into water courses and not into wastewater treatment plants, retained storm water should be inspected as provided in paragraphs (e)(2)(iii) (B), (C) and (D) of this section before drainage.

(iii) Plant drainage systems from undiked areas should, if possible, flow into ponds, lagoons or catchment basins, designed to retain oil or return it to the facility. Catchment basins should not be located in areas subject to periodic flooding.

(iv) If plant drainage is not engineered as above, the final discharge of all in-plant ditches should be equipped with a diversion system that could, in the event of an uncontrolled spill, return the oil to the plant.

(v) Where drainage waters are treated in more than one treatment unit, natural hydraulic flow should be used. If pump transfer is needed, two "lift" pumps should be provided, and at least one of the pumps should be permanently installed when such treatment is continuous. In any event, whatever techniques are used facility drainage systems should be adequately engineered to prevent oil from reaching navigable waters in the event of equipment failure or human error at the facility.

(2) *Bulk storage tanks (onshore); (excluding production facilities).* (i) No tank should be used for the storage of oil unless its material and construction are compatible with the material stored and conditions of storage such as pressure and temperature, etc.

(ii) All bulk storage tank installations should be constructed so that a secondary means of containment is provided for the entire contents of the largest single tank plus sufficient freeboard to allow for precipitation. Diked areas should be sufficiently impervious to contain spilled oil. Dikes, containment curbs, and pits are commonly employed for this purpose, but they may not always be appropriate. An alternative system could consist of a complete drainage trench enclosure arranged so that a spill could terminate and be safely confined in an inplant catchment basin or holding pond.

(iii) Drainage of rainwater from the diked area into a storm drain or an effluent discharge that empties into an open water course, lake, or pond, and bypassing the in-plant treatment system may be acceptable if:

(A) The bypass valve is normally sealed closed.

(B) Inspection of the run-off rain water ensures compliance with applicable water quality standards and will not cause a harmful discharge as defined in 40 CFR part 110.

(C) The bypass valve is opened, and resealed following drainage under responsible supervision.

(D) Adequate records are kept of such events.

(iv) Buried metallic storage tanks represent a potential for undetected spills. A new buried installation should be protected from corrosion by coatings, cathodic protection or other effective methods compatible with local soil conditions. Such buried tanks should at least be subjected to regular pressure testing.

(v) Partially buried metallic tanks for the storage of oil should be avoided, unless the buried section of the shell is adequately coated, since partial burial in damp earth can cause rapid corrosion of metallic surfaces, especially at the earth/air interface.

(vi) Aboveground tanks should be subject to periodic integrity testing, taking into account tank design (floating roof, etc.) and using such techniques as hydrostatic testing, visual inspection or a system of non-destructive shell thickness testing. Comparison records should be kept where appropriate, and tank supports and foundations should be included in these inspections. In addition, the outside of the tank should frequently be observed by operating personnel for signs of deterioration, leaks which might cause a spill, or accumulation of oil inside diked areas.

(vii) To control leakage through defective internal heating coils, the following factors should be considered and applied, as appropriate.

(A) The steam return or exhaust lines from internal heating coils which discharge into an open water course should be monitored for contamination, or passed through a settling tank, skimmer, or other separation or retention system.

(B) The feasibility of installing an external heating system should also be considered.

(viii) New and old tank installations should, as far as practical, be fail-safe engineered or updated into a fail-safe engineered installation to avoid spills. Consideration should be given to providing one or more of the following devices:

(A) High liquid level alarms with an audible or visual signal at a constantly manned operation or surveillance station; in smaller plants an audible air vent may suffice.

(B) Considering size and complexity of the facility, high liquid level pump cutoff devices set to stop flow at a predetermined tank content level.

(C) Direct audible or code signal communication between the tank gauger and the pumping station.

(D) A fast response system for determining the liquid level of each bulk storage tank such as digital computers, telepulse, or direct vision gauges or their equivalent.

(E) Liquid level sensing devices should be regularly tested to insure proper operation.

(ix) Plant effluents which are discharged into navigable waters should have disposal facilities observed frequently enough to detect possible system upsets that could cause an oil spill event.

(x) Visible oil leaks which result in a loss of oil from tank seams, gaskets, rivets and bolts sufficiently large to cause the accumulation of oil in diked areas should be promptly corrected.

(xi) Mobile or portable oil storage tanks (onshore) should be positioned or located so as to prevent spilled oil from reaching navigable waters. A secondary means of containment, such as dikes or catchment basins, should be furnished for the largest single compartment or tank. These facilities should be located where they will not be subject to periodic flooding or washout.

(3) *Facility transfer operations, pumping, and in-plant process (onshore); (excluding production facilities).* (i) Buried piping installations should have a protective wrapping and coating and should be cathodically protected if soil conditions warrant. If a section of buried line is exposed for any reason, it should be carefully examined for deterioration. If corrosion damage is found, additional examination and corrective action should be taken as indicated by the magnitude of the damage. An alternative would be the more frequent use of exposed pipe corridors or galleries.

(ii) When a pipeline is not in service, or in standby service for an extended time the terminal connection at the transfer point should be capped or blank-flanged, and marked as to origin.

(iii) Pipe supports should be properly designed to minimize abrasion and corrosion and allow for expansion and contraction.

(iv) All aboveground valves and pipelines should be subjected to regular examinations by operating personnel at which time the general condition of items, such as flange joints, expansion joints, valve glands and bodies, catch pans, pipeline supports, locking of valves, and metal surfaces should be assessed. In addition, periodic pressure testing may be warranted for piping in areas where facility drainage is such that a failure might lead to a spill

event.

(v) Vehicular traffic granted entry into the facility should be warned verbally or by appropriate signs to be sure that the vehicle, because of its size, will not endanger above ground piping.

(4) *Facility tank car and tank truck loading/unloading rack (onshore).* (i) Tank car and tank truck loading/unloading procedures should meet the minimum requirements and regulation established by the Department of Transportation.

(ii) Where rack area drainage does not flow into a catchment basin or treatment facility designed to handle spills, a quick drainage system should be used for tank truck loading and unloading areas. The containment system should be designed to hold at least maximum capacity of any single compartment of a tank car or tank truck loaded or unloaded in the plant.

(iii) An interlocked warning light or physical barrier system, or warning signs, should be provided in loading/unloading areas to prevent vehicular departure before complete disconnect of flexible or fixed transfer lines.

(iv) Prior to filling and departure of any tank car or tank truck, the lowermost drain and all outlets of such vehicles should be closely examined for leakage, and if necessary, tightened, adjusted, or replaced to prevent liquid leakage while in transit.

(5) *Oil production facilities (onshore)*—(i) *Definition.* An onshore production facility may include all wells, flowlines, separation equipment, storage facilities, gathering lines, and auxiliary non-transportation-related equipment and facilities in a single geographical oil or gas field operated by a single operator.

(ii) *Oil production facility (onshore) drainage.* (A) At tank batteries and central treating stations where an accidental discharge of oil would have a reasonable possibility of reaching navigable waters, the dikes or equivalent required under § 112.7(c)(1) should have drains closed and sealed at all times except when rainwater is being drained. Prior to drainage, the diked area should be inspected as provided in paragraphs (e)(2)(iii) (B), (C), and (D) of this section. Accumulated oil on the rainwater should be picked up and returned to storage or disposed of in accordance with approved methods.

(B) Field drainage ditches, road ditches, and oil traps, sumps or skimmers, if such exist, should be inspected at regularly scheduled intervals for accumulation of oil that may have escaped from small leaks. Any such accumulations should be removed.

(iii) *Oil production facility (onshore) bulk storage tanks.* (A) No tank should be used for the storage of oil unless its material and construction are compatible with the material stored and the cpnditions of storage.

(B) All tank battery and central treating plant installations should be provided with a secondary means of containment for the entire contents of the largest single tank if feasible, or alternate systems such as those outlined in § 112.7(c)(1). Drainage from undiked areas should be safely confined in a catchment basin or holding pond.

(C) All tanks containing oil should be visually examined by a competent person for condition and need for maintenance on a scheduled periodic basis. Such examination should include the foundation and supports of tanks that are above the surface of the ground.

(D) New and old tank battery installations should, as far as practical, be fail-safe engineered or updated into a fail-safe engineered installation to prevent spills. Consideration should be given to one or more of the following:

(*1*) Adequate tank capacity to assure that a tank will not overfill should a pumper/gauger be delayed in making his regular rounds.

(*2*) Overflow equalizing lines between tanks so that a full tank can overflow to an adjacent tank.

(*3*) Adequate vacuum protection to prevent tank collapse during a pipeline run.

(*4*) High level sensors to generate and transmit an alarm signal to the computer where facilities are a part of a computer production control system.

(iv) *Facility transfer operations, oil production facility (onshore).* (A) All above ground valves and pipelines should be examined periodically on a scheduled basis for general condition of items such as flange joints, valve glands and bodies, drip pans, pipeline supports, pumping well polish rod stuffing boxes, bleeder and gauge valves.

(B) Salt water (oil field brine) disposal facilities should be exained often, particularly following a sudden change in atmospheric temperature to detect possible system upsets that could cause an oil discharge.

(C) Production facilities should have a program of flowline maintenance to prevent spills from this source. The program should include periodic examinations, corrosion protection, flowline replacement, and adequate records, as appropriate, for the individual facility.

(6) *Oil drilling and workover facilities (onshore).* (i) Mobile drilling or workover equipment should be positioned or located so as to prevent spilled oil from reaching navigable waters.

(ii) Depending on the location, catchment basins or diversion structures may be necessary to intercept and contain spills of fuel, crude oil, or oily drilling fluids.

(iii) Before drilling below any casing string or during workover operations,

a blowout prevention (BOP) assembly and well control system should be installed that is capable of controlling any well head pressure that is expected to be encountered while that BOP assembly is on the well. Casing and BOP installations should be in accordance with State regulatory agency requirements.

(7) *Oil drilling, production, or workover facilities (offshore).* (i) Definition: "An oil drilling, production or workover facility (offshore)" may include all drilling or workover equipment, wells, flowlines, gathering lines, platforms, and auxiliary nontransportation-related equipment and facilities in a single geographical oil or gas field operated by a single operator.

(ii) Oil drainage collection equipment should be used to prevent and control small oil spillage around pumps, glands, valves, flanges, expansion joints, hoses, drain lines, separators, treaters, tanks, and allied equipment. Drains on the facility should be controlled and directed toward a central collection sump or equivalent collection system sufficient to prevent discharges of oil into the navigable waters of the United States. Where drains and sumps are not practicable oil contained in collection equipment should be removed as often as necessary to prevent overflow.

(iii) For facilities employing a sump system, sump and drains should be adequately sized and a spare pump or equivalent method should be available to remove liquid from the sump and assure that oil does not escape. A regular scheduled preventive maintenance inspection and testing program should be employed to assure reliable operation of the liquid removal system and pump start-up device. Redundant automatic sump pumps and control devices may be required on some installations.

(iv) In areas where separators and treaters are equipped with dump valves whose predominant mode of failure is in the closed position and pollution risk is high, the facility should be specially equipped to prevent the escape of oil. This could be accomplished by extending the flare line to a diked area if the separator is near shore, equipping it with a high liquid level sensor that will automatically shut-in wells producing to the separator, parallel redundant dump valves, or other feasible alternatives to prevent oil discharges.

(v) Atmospheric storage or surge tanks should be equipped with high liquid level sensing devices or other acceptable alternatives to prevent oil discharges.

(vi) Pressure tanks should be equipped with high and low pressure sensing devices to activate an alarm and/or control the flow or other acceptable alternatives to prevent oil discharges.

(vii) Tanks should be equipped with suitable corrosion protection.

(viii) A written procedure for inspecting and testing pollution prevention equipment and systems should be prepared and maintained at the facility. Such procedures should be included as part of the SPCC Plan.

(ix) Testing and inspection of the pollution prevention equipment and systems at the facility should be conducted by the owner or operator on a scheduled periodic basis commensurate with the complexity, conditions and circumstances of the facility or other appropriate regulations.

(x) Surface and subsurface well shut-in valves and devices in use at the facility should be sufficiently described to determine method of activation or control, e.g., pressure differential, change in fluid or flow conditions, combination of pressure and flow, manual or remote control mechanisms. Detailed records for each well, while not necessarily part of the plan should be kept by the owner or operator.

(xi) Before drilling below any casing string, and during workover operations a blowout preventer (BOP) assembly and well control system should be installed that is capable of controlling any well-head pressure that is expected to be encountered while that BOP assembly is on the well. Casing and BOP installations should be in accordance with State regulatory agency requirements.

(xii) Extraordinary well control measures should be provided should emergency conditions, including fire, loss of control and other abnormal conditions, occur. The degree of control system redundancy should vary with hazard exposure and probable consequences of failure. It is recommended that surface shut-in systems have redundant or "fail close" valving. Subsurface safety valves may not be needed in producing wells that will not flow but should be installed as required by applicable State regulations.

(xiii) In order that there will be no misunderstanding of joint and separate duties and obligations to perform work in a safe and pollution free manner, written instructions should be prepared by the owner or operator for contractors and subcontractors to follow whenever contract activities include servicing a well or systems appurtenant to a well or pressure vessel. Such instructions and procedures should be maintained at the offshore production facility. Under certain circumstances and conditions such contractor activities may require the presence at the facility of an authorized representative of the owner or operator who would intervene when necessary to prevent a spill event.

(xiv) All manifolds (headers) should be equipped with check valves on individual flowlines.

(xv) If the shut-in well pressure is greater than the working pressure of

the flowline and manifold valves up to and including the header valves associated with that individual flowline, the flowline should be equipped with a high pressure sensing device and shut-in valve at the wellhead unless provided with a pressure relief system to prevent over pressuring.

(xvi) All pipelines appurtenant to the facility should be protected from corrosion. Methods used, such as protective coatings or cathodic protection, should be discussed.

(xvii) Sub-marine pipelines appurtenant to the facility should be adequately protected against environmental stresses and other activities such as fishing operations.

(xviii) Sub-marine pipelines appurtenant to the facility should be in good operating condition at all times and inspected on a scheduled periodic basis for failures. Such inspections should be documented and maintained at the facility.

(8) *Inspections and records.* Inspections required by this part should be in accordance with written procedures developed for the facility by the owner or operator. These written procedures and a record of the inspections, signed by the appropriate supervisor or inspector, should be made part of the SPCC Plan and maintained for a period of three years.

(9) *Security (excluding oil production facilities).* (i) All plants handling, processing, and storing oil should be fully fenced, and entrance gates should be locked and/or guarded when the plant is not in production or is unattended.

(ii) The master flow and drain valves and any other valves that will permit direct outward flow of the tank's content to the surface should be securely locked in the closed position when in non-operating or non-standby status.

(iii) The starter control on all oil pumps should be locked in the "off" position or located at a site accessible only to authorized personnel when the pumps are in a non-operating or non-standby status.

(iv) The loading/unloading connections of oil pipelines should be securely capped or blank-flanged when not in service or standby service for an extended time. This security practice should also apply to pipelines that are emptied of liquid content either by draining or by inert gas pressure.

(v) Facility lighting should be commensurate with the type and location of the facility. Consideration should be given to: (A) Discovery of spills occurring during hours of darkness, both by operating personnel, if present, and by non-operating personnel (the general public, local police, etc.) and (B) prevention of spills occurring through acts of vandalism.

(10) *Personnel, training and spill prevention procedures.* (i) Owners or operators are responsible for properly instructing their personnel in the operation and maintenance of equipment to prevent the discharges of oil and applicable pollution control laws, rules and regulations.

(ii) Each applicable facility should have a designated person who is accountable for oil spill prevention and who reports to line management.

(iii) Owners or operators should schedule and conduct spill prevention briefings for their operating personnel at intervals frequent enough to assure adequate understanding of the SPCC Plan for that facility. Such briefings should highlight and describe known spill events or failures, malfunctioning components, and recently developed precautionary measures.

APPENDIX—MEMORANDUM OF UNDERSTANDING BETWEEN THE SECRETARY OF TRANSPORTATION AND THE ADMINISTRATOR OF THE ENVIRONMENTAL PROTECTION AGENCY

SECTION II—DEFINITIONS

The Environmental Protection Agency and the Department of Transportation agree that for the purposes of Executive Order 11548, the term:

(1) "Non-transportation-related onshore and offshore facilities" means:

(A) Fixed onshore and offshore oil well drilling facilities including all equipment and appurtenances related thereto used in drilling operations for exploratory or development wells, but excluding any terminal facility, unit or process integrally associated with the handling or transferring of oil in bulk to or from a vessel.

(B) Mobile onshore and offshore oil well drilling platforms, barges, trucks, or other mobile facilities including all equipment and appurtenances related thereto when such mobile facilities are fixed in position for the purpose of drilling operations for exploratory or development wells, but excluding any terminal facility, unit or process integrally associated with the handling or transferring of oil in bulk to or from a vessel.

(C) Fixed onshore and offshore oil production structures, platforms, derricks, and rigs including all equipment and appurtenances related thereto, as well as completed wells and the wellhead separators, oil separators, and storage facilities used in the production of oil, but excluding any terminal facility, unit or process integrally associated with the handling or transferring of oil in bulk to or from a vessel.

(D) Mobile onshore and offshore oil production facilities including all equipment and appurtenances related thereto as well as completed wells and wellhead equipment, piping from wellheads to oil separators, oil separators, and storage facilities used in the production of oil when such mobile facilities are fixed in position for the purpose of oil production operations, but excluding any terminal facility, unit or process integrally associated with the handling or transferring of oil in bulk to or from a vessel.

(E) Oil refining facilities including all equipment and appurtenances related thereto as well as in-plant processing units, storage units, piping, drainage systems and waste treatment units used in the refining of oil, but excluding any terminal facility, unit or process integrally associated with the handling or transferring of oil in bulk to

or from a vessel.

(F) Oil storage facilities including all equipment and appurtenances related thereto as well as fixed bulk plant storage, terminal oil storage facilities, consumer storage, pumps and drainage systems used in the storage of oil, but excluding inline or breakout storage tanks needed for the continuous operation of a pipeline system and any terminal facility, unit or process integrally associated with the handling or transferring of oil in bulk to or from a vessel.

(G) Industrial, commercial, agricultural or public facilities which use and store oil, but excluding any terminal facility, unit or process integrally associated with the handling or transferring of oil in bulk to or from a vessel.

(H) Waste treatment facilities including in-plant pipelines, effluent discharge lines, and storage tanks, but excluding waste treatment facilities located on vessels and terminal storage tanks and appurtenances for the reception of oily ballast water or tank washings from vessels and associated systems used for off-loading vessels.

(I) Loading racks, transfer hoses, loading arms and other equipment which are appurtenant to a nontransportation-related facility or terminal facility and which are used to transfer oil in bulk to or from highway vehicles or railroad cars.

(J) Highway vehicles and railroad cars which are used for the transport of oil exclusively within the confines of a nontransportation-related facility and which are not intended to transport oil in interstate or intrastate commerce.

(K) Pipeline systems which are used for the transport of oil exclusively within the confines of a nontransportation-related facility or terminal facility and which are not intended to transport oil in interstate or intrastate commerce, but excluding pipeline systems used to transfer oil in bulk to or from a vessel.

(2) "Transportation-related onshore and offshore facilities" means:

(A) Onshore and offshore terminal facilities including transfer hoses, loading arms and other equipment and appurtenances used for the purpose of handling or transferring oil in bulk to or from a vessel as well as storage tanks and appurtenances for the reception of oily ballast water or tank washings from vessels, but excluding terminal waste treatment facilities and terminal oil storage facilities.

(B) Transfer hoses, loading arms and other equipment appurtenant to a nontransportation-related facility which is used to transfer oil in bulk to or from a vessel.

(C) Interstate and intrastate onshore and offshore pipeline systems including pumps and appurtenances related thereto as well as in-line or breakout storage tanks needed for the continuous operation of a pipeline system, and pipelines from onshore and offshore oil production facilities, but excluding onshore and offshore piping from wellheads to oil separators and pipelines which are used for the transport of oil exclusively within the confines of a nontransportation-related facility or terminal facility and which are not intended to transport oil in interstate or intrastate commerce or to transfer oil in bulk to or from a vessel.

(D) Highway vehicles and railroad cars which are used for the transport of oil in interstate or intrastate commerce and the equipment and appurtenances related thereto, and equipment used for the fueling of locomotive units, as well as the rights-of-way on which they operate. Excluded are highway vehicles and railroad cars and motive power used exclusively within the confines of a nontransportation-related facility, or terminal facility and which are not intended for use in interstate or intrastate commerce.

Appendix B

Appendix B

RECORD OF DIKE DRAINAGE

Caribbean Petroleum Refining, L.P.

Bayamon, Puerto Rico

Diked Area	Date	Presence of Oil	Time Started	Time Finished	Comments	Operator Signature

MONTHLY INSPECTION CHECKLIST FOR BULK STORAGE TANKS

Caribbean Petroleum Refining LP
Bayamon, Puerto Rico

Tank No.	Date	Items Inspected								Comments	Inspector Initials
		Corrosion/ Surface Pitting	Cracking of surface and/or weld seams	Leaking from surface and/or seams	Buckling/ Bulging	Discoloration, peeling, drip marks	Foundation - erosion/bottom leakage	Leaking of Manway	Other		
A-101											
A-102											
A-103											
A-104											
A-105											
A-106											
A-201											
A-202											

MONTHLY INSPECTION CHECKLIST FOR BULK STORAGE TANKS

Caribbean Petroleum Refining LP
Bayamon, Puerto Rico

Tank No.	Date	Items Inspected								Comments	Inspector Initials
		Corrosion/ Surface Pitting	Cracking of surface and/or weld seams	Leaking from surface and/or seams	Buckling/ Bulging	Discoloration, peeling, drip marks	Foundation - erosion/bottom leakage	Leaking of Manway	Other		
A-203											
A-402											
A-403											
A-404											
A-405											
A-406											
A-407											
A-408											

MONTHLY INSPECTION CHECKLIST FOR BULK STORAGE TANKS

Caribbean Petroleum Refining LP
Bayamon, Puerto Rico

Tank No.	Date	Items Inspected								Comments	Inspector Initials
		Corrosion/ Surface Pitting	Cracking of surface and/or weld seams	Leaking from surface and/or seams	Buckling/ Bulging	Discoloration, peeling, drip marks	Foundation - erosion/bottom leakage	Leaking of Manway	Other		
A-409											
A-410											
A-411											
A-451											
A-452											
A-453											
A-454											
A-455											

MONTHLY INSPECTION CHECKLIST FOR BULK STORAGE TANKS

Caribbean Petroleum Refining LP
Bayamon, Puerto Rico

Tank No.	Date	Items Inspected								Comments	Inspector Initials
		Corrosion/ Surface Pitting	Cracking of surface and/or weld seams	Leaking from surface and/or seams	Buckling/ Bulging	Discoloration, peeling, drip marks	Foundation - erosion/bottom leakage	Leaking of Manway	Other		
A-482											
A-501											
A-502											
A-503											
A-551											
A-552											
A-601											
A-602											

MONTHLY INSPECTION CHECKLIST FOR BULK STORAGE TANKS

Caribbean Petroleum Refining LP
Bayamon, Puerto Rico

Tank No.	Date	Items Inspected								Comments	Inspector Initials
		Corrosion/ Surface Pitting	Cracking of surface and/or weld seams	Leaking from surface and/or seams	Buckling/ Bulging	Discoloration, peeling, drip marks	Foundation - erosion/bottom leakage	Leaking of Manway	Other		
A-603											
A-604											
A-605											
A-606											
A-607											
A-608											
A-609											
A-610											

MONTHLY INSPECTION CHECKLIST FOR BULK STORAGE TANKS

Caribbean Petroleum Refining LP
Bayamon, Puerto Rico

Tank No.	Date	Items Inspected								Comments	Inspector Initials
		Corrosion/ Surface Pitting	Cracking of surface and/or weld seams	Leaking from surface and/or seams	Buckling/ Bulging	Discoloration, peeling, drip marks	Foundation - erosion/bottom leakage	Leaking of Manway	Other		
A-611											
A-612											
A-682											
A-1000											
A-1001											
A-001											
A-002											
A-003											

Daily SPCC Inspection Checklist

Copy to:
__ Miguel Berrios
__ Domingo Pérez

Date: _____
Operator's Name: _____
Batch Number: _____
Supervisor's Initials: _____

Tank #	Visible leaks?		Soil stains in area?	
	Yes	No	Yes	No
101				
102				
103				
104				
105				
106				
201				
202				
203				
551				
552				
451				
452				
481				
453				
454				
503				
402				
403				
301				
302				
501				
502				
601				
602				
603				
604				
605				
504				
404				
405				
406				
407				
408				
409				
410				
411				
455				
482				
606				
607				
608				
609				
610				
611				
612				
1000				
1001				

Daily SPCC Inspection Checklist

Copy to:

__ Miguel Berrios

__ Domingo Pérez

Date:_____

Operator's Name:_____

Batch Number:_____

Location	Visible leaks?		Soil stains in area?	
	Yes	No	Yes	No
Fuel Oil Cummins Pump Area				
Fuel Oil Pump Area				
Jet Fuel Transfer Pump Area				
Crude Charge Pump Area				
Oil Drum Loading Pump Area				
Asphalt Loading Rack Pump Area				
612 Asphalt Transfer Pump Area				
Kerosene and Jet Fuel Pump Area				
Platformer Charge Pump Area				
Gasoline & Diesel Cummins Pump Area				
Gasoline Pump Area				
Jet Fuel Transfer Pumping Station				
Avenue D Pipe Rack				
Avenue C Pipe Rack				
Platformer Charge Pump Pipe Rack				
Crude Charge Pump Pipe Rack				
Gasoline Pump Area Pipe Rack				
Process Area Overhead Pipe Rack				
Fuel Oil Transfer Pipe Rack				
Asphalt Loading Pipe Rack				

MONTHLY INSPECTION CHECKLIST FOR BULK STORAGE TANK SECONDARY CONTAINMENT SYSTEMS

Caribbean Petroleum Refining LP
Bayamon, Puerto Rico

Tank No.	Date	Items Inspected									Comments	Inspector Initials
		Erosion of dikes/ berms	Excess vegetation on dikes/berms and floor	Debris within the containment area	Drainage valve operation and/or corrosion	Drainage system free of debris	Standing liquid within containment area	Stains on containment area floor	Stressed vegetation within the containment area	Other		
A-101												
A-102												
A-103												
A-104												
A-105												
A-106												
A-201												
A-202												

MONTHLY INSPECTION CHECKLIST FOR BULK STORAGE TANK SECONDARY CONTAINMENT SYSTEMS

Caribbean Petroleum Refining LP
Bayamon, Puerto Rico

Tank No.	Date	Items Inspected									Comments	Inspector Initials
		Erosion of dikes/ berms	Excess vegetation on dikes/berms and floor	Debris within the containment area	Drainage valve operation and/or corrosion	Drainage system free of debris	Standing liquid within containment area	Stains on containment area floor	Stressed vegetation within the containment area	Other		
A-203												
A-402												
A-403												
A-404												
A-405												
A-406												
A-407												
A-408												

MONTHLY INSPECTION CHECKLIST FOR BULK STORAGE TANK SECONDARY CONTAINMENT SYSTEMS

Caribbean Petroleum Refining LP
Bayamon, Puerto Rico

		Items Inspected										
Tank No.	Date	Erosion of dikes/ berms	Excess vegetation on dikes/berms and floor	Debris within the containment area	Drainage valve operation and/or corrosion	Drainage system free of debris	Standing liquid within containment area	Stains on containment area floor	Stressed vegetation within the containment area	Other	Comments	Inspector Initials
A-409												
A-410												
A-411												
A-451												
A-452												
A-453												
A-454												
A-455												

MONTHLY INSPECTION CHECKLIST FOR BULK STORAGE TANK SECONDARY CONTAINMENT SYSTEMS

Caribbean Petroleum Refining LP
Bayamon, Puerto Rico

Tank No.	Date	Items Inspected									Comments	Inspector Initials
		Erosion of dikes/ berms	Excess vegetation on dikes/berms and floor	Debris within the containment area	Drainage valve operation and/or corrosion	Drainage system free of debris	Standing liquid within containment area	Stains on containment area floor	Stressed vegetation within the containment area	Other		
A-482												
A-501												
A-502												
A-503												
A-551												
A-552												
A-601												
A-602												

MONTHLY INSPECTION CHECKLIST FOR BULK STORAGE TANK SECONDARY CONTAINMENT SYSTEMS

Caribbean Petroleum Refining LP
Bayamon, Puerto Rico

Tank No.	Date	Items Inspected									Comments	Inspector Initials
		Erosion of dikes/ berms	Excess vegetation on dikes/berms and floor	Debris within the containment area	Drainage valve operation and/or corrosion	Drainage system free of debris	Standing liquid within containment area	Stains on containment area floor	Stressed vegetation within the containment area	Other		
A-603												
A-604												
A-605												
A-606												
A-607												
A-608												
A-609												
A-610												

MONTHLY INSPECTION CHECKLIST FOR BULK STORAGE TANK SECONDARY CONTAINMENT SYSTEMS

Caribbean Petroleum Refining LP
Bayamon, Puerto Rico

Tank No.	Items Inspected: Date	Erosion of dikes/ berms	Excess vegetation on dikes/berms and floor	Debris within the containment area	Drainage valve operation and/or corrosion	Drainage system free of debris	Standing liquid within containment area	Stains on containment area floor	Stressed vegetation within the containment area	Other	Comments	Inspector Initials
A-611												
A-612												
A-682												
A-1000												
A-1001												
A-001												
A-002												
A-003												

MONTHLY INSPECTION CHECKLIST FOR BULK STORAGE TANK PIPING SYSTEMS

Caribbean Petroleum Refining LP
Bayamon, Puerto Rico

Tank No.	Date	Items Inspected								Comments	Inspector Initials
		Leaking of flanges	Leaking of valves	Cracking and leaking of pipes	External corrosion of pipes or equipment	Cracks/leaks at joints of shell appurtenances	Excessive pipe deflection	Pipe discoloration	Other		
A-101											
A-102											
A-103											
A-104											
A-105											
A-106											
A-201											
A-202											

MONTHLY INSPECTION CHECKLIST FOR BULK STORAGE TANK PIPING SYSTEMS

Caribbean Petroleum Refining LP
Bayamon, Puerto Rico

Tank No.	Date	Items Inspected								Comments	Inspector Initials
		Leaking of flanges	Leaking of valves	Cracking and leaking of pipes	External corrosion of pipes or equipment	Cracks/leaks at joints of shell appurtenances	Excessive pipe deflection	Pipe discoloration	Other		
A-203											
A-402											
A-403											
A-404											
A-405											
A-406											
A-407											
A-408											

MONTHLY INSPECTION CHECKLIST FOR BULK STORAGE TANK PIPING SYSTEMS

Caribbean Petroleum Refining LP
Bayamon, Puerto Rico

Tank No.	Date	Items Inspected								Comments	Inspector Initials
		Leaking of flanges	Leaking of valves	Cracking and leaking of pipes	External corrosion of pipes or equipment	Cracks/leaks at joints of shell appurtenances	Excessive pipe deflection	Pipe discoloration	Other		
A-409											
A-410											
A-411											
A-451											
A-452											
A-453											
A-454											
A-455											

MONTHLY INSPECTION CHECKLIST FOR BULK STORAGE TANK PIPING SYSTEMS

Caribbean Petroleum Refining LP
Bayamon, Puerto Rico

Tank No.	Date	Items Inspected								Comments	Inspector Initials
		Leaking of flanges	Leaking of valves	Cracking and leaking of pipes	External corrosion of pipes or equipment	Cracks/leaks at joints of shell appurtenances	Excessive pipe deflection	Pipe discoloration	Other		
A-482											
A-501											
A-502											
A-503											
A-551											
A-552											
A-601											
A-602											

MONTHLY INSPECTION CHECKLIST FOR BULK STORAGE TANK PIPING SYSTEMS

Caribbean Petroleum Refining LP
Bayamon, Puerto Rico

Tank No.	Date	Items Inspected								Comments	Inspector Initials
		Leaking of flanges	Leaking of valves	Cracking and leaking of pipes	External corrosion of pipes or equipment	Cracks/leaks at joints of shell appurtenances	Excessive pipe deflection	Pipe discoloration	Other		
A-603											
A-604											
A-605											
A-606											
A-607											
A-608											
A-609											
A-610											

MONTHLY INSPECTION CHECKLIST FOR BULK STORAGE TANK PIPING SYSTEMS

Caribbean Petroleum Refining LP
Bayamon, Puerto Rico

Tank No.	Date	Items Inspected								Comments	Inspector Initials
		Leaking of flanges	Leaking of valves	Cracking and leaking of pipes	External corrosion of pipes or equipment	Cracks/leaks at joints of shell appurtenances	Excessive pipe deflection	Pipe discoloration	Other		
A-611											
A-612											
A-682											
A-1000											
A-1001											
A-001											
A-002											
A-003											

MONTHLY INSPECTION CHECKLIST FOR PUMP STATIONS

Caribbean Petroleum Refining LP
Bayamon, Puerto Rico

Location	Date	Items Inspected							Comments	Inspector Initials
		Leaking Seals	Excessive Vibration	Erosion of Foundation	Evidence of Leaks	Erosion of Curbing	Drain Blockage	Other		
612 Asphalt Transfer Pump Area										
Kerosene and Jet Fuel Pump Area										
Platformer Charge Pump Area										
Gasoline & Diesel Cummins Pump Area										
Gasoline Pump Area										
Jet Fuel Transfer Pumping Station										

MONTHLY INSPECTION CHECKLIST FOR PUMP STATIONS

Caribbean Petroleum Refining LP
Bayamon, Puerto Rico

Location	Date	Items Inspected							Comments	Inspector Initials
		Leaking Seals	Excessive Vibration	Erosion of Foundation	Evidence of Leaks	Erosion of Curbing	Drain Blockage	Other		
Fuel Oil Cummins Pump Area										
Fuel Oil Pump Area										
Jet Fuel Transfer Pump Area										
Crude Charge Pump Area										
Oil Drum Loading Pump Area										
Asphalt Loading Rack Pump Area										

MONTHLY INSPECTION CHECKLIST FOR UNDIKED PIPING SYSTEMS

Caribbean Petroleum Refining LP
Bayamon, Puerto Rico

Location	Date	Items Inspected							Comments	Inspector Initials
		Leaking of flanges	Leaking of valves	Cracking and leaking of pipes	External corrosion of pipes or equipment	Excessive pipe deflection	Pipe Support Erosion	Other		
Avenue D Pipe Rack										
Avenue C Pipe Rack										
Platformer Charge Pump Pipe Rack										
Crude Charge Pump Pipe Rack										
Gasoline Pump Area Pipe Rack										
Process Area Overhead Pipe Rack										
Fuel Oil Transfer Pipe Rack										
Asphalt Loading Pipe Rack										

DISCHARGE PREVENTION MEETING LOG

Caribbean Petroleum Refining, LP
Bayamon, Puerto Rico

Date: _____

Attendees: _____

_____

_____

_____

_____

_____

_____

_____

_____

Subjects and Issues: _____

_____

_____

_____

_____

_____

_____

_____

Recommendations : _____

_____

_____

_____

_____

PERSONNEL RESPONSE TRAINING LOG

Caribbean Petroleum Refining, L.P.
Bayamon, Puerto Rico

Name	Date	Response Training	Hours	Prevention Training	Hours

Appendix C

SPILL PREVENTION CONTROL & COUNTERMEASURES PLAN
TRAINING OUTLINE

I. Regulations

A. Clean Water (CWA)

B. Resources Conservation and Recovery (RCRA)

C. Superfund amendment Reauthorization (SARA)

II. CPC Water Permit

III. CPC Discharges

A. Storm water

B. Process Water

C. Sanitary

IV. Substances in the Plant

A. Hydrocarbons

1. LPG, Gasoline, Diesels, Fuel Oils, Crude Oils, Jet Fuel, Asphalts

2. Chemicals

a. Acid, bases, catalysts, lubricants inhibitors, additives, detergents.

3. Others

a. API Separator Sludge
b. Solid K.O. Pit Sludge
c. Depurator Sludge
d. Equalization Basin Sludge
e. Tank Bottoms Sludge
f. Heat Exchangers Sludge

4. RCRA Storage Area

a. 90 days maximum
b. Procedure for storing

V. The Plans

A. Minimize effect of substances to ambient

B. Control spill of substance to ambient

VI. Operation

A. Tank Farm

1. Draining of dikes
2. Draining water from tanks
3. Record keeping log

B. ET-1 Tank

1. Excess water during rainfall

C. Underground Recovery System

1. Contractor

D. Sampling Procedures

1. Disposal of bad samples
2. Disposal of rags

VII. Maintenance

A. Repair lines

B. Pumps maintenance

C. Use of vacuum truck and hoses

VIII. Compliance

A. Written Plan

B. Approved by Agencies

C. Inventory of Toxic Substances

D. Spill Log

E. Inspections

F. Report all spills

G. Trainings

CARIBBEAN PETROLEUM CORPORATION
DEPARTAMENTO DE INGENIERIA

ADIESTRAMIENTO PROGRAMAS

"Best Management Practices Plan"

"Spill Prevention, Control and Countermeasures Plan"

Bayamón, Puerto Rico

PROPÓSITO

El "Best Management Practices Plan" o como comúnmente se conoce: BMP, fue preparado deacuerdo con las de buenas prácticas de ingeniería y las guías sometidas por EPA en el documento del "NPDES Best Management Practices Guidance Document".

Este documento establece las fuentes potenciales que pueden impactar la calidad de agua en los canales de correntías o aguas de descarga de proceso. El BMPP discute detenidamente aquellas fuentes que podrían impactar considerablemente dichos canales. A su vez establece la manera de prevenir o contener cualquier derrame de productos almacenados o utilizados en la refinería de manera que podamos minimizar el potencial de contiminación.

Por lo tanto, Caribbean Petroleum Corporation (CPC) en su afán de proteger la seguridad de sus empleados y contratistas, sin pasar por alto la protección del medio ambiente, ha creado una lista de inspecciones a diferentes áreas, equipos y tanques que serán efectuadas en periódos diarios, mensuales y cada tres (3) meses. Estas inpecciones serán realizadas en su mayor extensión por el personal de Karmar Co. y la parte restante por el personal de CPC.

El "Spill Prevention, Control and Countermeasures Plan" o como comúnmente se le conoce: SPCC, fue preparado para que en conjunto al BMP mantuvieramos los standares de control apropiados en el esfuerzo de evitar derrames de índole peligroso o no peligroso en los predios de la refinería.

Teniendo dicha meta en mente ambos programas han desarrollado una serie de inspecciones periódicas a ser realizadas ya sean diarias, mensuales, cada tres (3) meses, anuales o bi-anuales.

ADVERTENCIAS AMBIENTALES

Es importante que el grupo a cargo de realizar las inspecciones periódicas esté consciente de la importancia de su trabajo en la parte ambiental. Este grupo de remediación e inspectores debe poseer un amplio criterio en distinguir situaciones peligrosas antes de que ocurran. Por lo tanto no debe pasar por alto ninguna situación, que a simple vista parezca inofensiva, que pueda traer como resultado una situación detrimente al ambiente y a la humanidad.

Debe reportar ya sea verbalmente o por escrito cualquier situación vista en el campo de trabajo (field) que requiera seguimiento de parte de la administración de la refineria. Utilizará la comunicación por radio en aquellos momentos que requiera pronta atención a la situación vigente. Y en caso de una emergencia movilizará las fuentes necesarias para controlar o prevenir situaciones severas en el medio ambiente.

En caso de algún incidente o accidente real, se deben advertir y/o notificar al siguiente personal:

1. Supervisor de Turno
2. Ingeniero de Proceso a cargo del programa del BMP/SPCC

De no conseguir a ninguna de las personas mencionadas arriba se debe tratar comunicación con el personal de seguridad y/o algún gerente (Gerente de Operaciones/Ambiental/Seguridad). No debe desistir en hacer contacto hasta tanto no consiga comunicación directa con cualquier persona mencionada arriba.

Recuerde; la velocidad conque solucione alguna situación, dependerá, de la velocidad conque pueda transmitir la situación, de la manera correcta y al personal correcto.

SEGURIDAD

Es importante mantener los stándares de seguridad en las inspecciones a realizarse. No tome riesgos innecesarios. Es tan importante su vida como la vida de los que lo rodean. En caso de tener alguna duda en como atacar o solucionar una situación comuníquese de inmediato con el supervisor de turno, ingeniero de proceso a cargo del programa o el personal de seguridad pertinente.

PERSONAL		***RADIO***	***TELÉFONO***
Supervisores de Turno		Frecuencias 3, 6 y 7	
Ingeniero de Proceso		Frecuencias 3, 6 y 7	Ext. 356
Seguridad		Frecuencias 3, 6 y 7	Ext. 251
Gerentes	Miguel Berrios	Frecuencias 3, 6 y 7	Ext. 273
	José Osorio	Frecuencia 2	Ext. 330
	Jorge Dávila	Frecuencias 3, 6 y 7	Ext. 278
Main Gate		Frecuencias 3, 6 y 7	Ext. 292/293

PREVENCIÓN DE DERRAMES

El programa de BMP y SPCC fue creado para evitar derrames tanto de material peligroso como de material no peligroso en las áreas de proceso y no proceso dentro de la refinería. Por lo tanto, la mejor manera para prevenir derrames en dichas áreas es realizando de una manera eficaz y eficiente las inspecciones asignadas a cada uno de los programas.

Para realizar las inspecciones de todas las áreas es indispensable que el inspector se sitúe en el área. Una inspección no será valida si los recursos utilizados para la misma fueron obtenidos de la inspección pasada. Si podrá utilizar la inspección pasada para darle seguimientos a trabajos ya notificados

Cualquier válvula, línea, "flange" o tanque con fuga de producto representa un posible derrame. Es responsabilidad del inspector notificar el mismo para poner alto a dicha situación. Cualquier fuga de producto representa un derrame de bajo o alto potencial y por lo tanto será un riesgo directo para el personal obrero, la humanidad y el ambiente.

REPUESTAS A DERRAME

El personal a cargo de las inspecciones notificará al personal pertinente de cualquier derrame en las áreas de trabajo. Dependiendo la envelgadura del derrame se activaran una serie de contratistas para la solución del mismo. Es importante que exista buena comunicación entre los inspectores y supervisores de turno o ingeniero de proceso ya que la misma podria representar la solución inmediata a cualquier derrame independiente de la intensidad del mismo.

El o los inspectores, utilizando las medidas de seguridad pertinentes podrán disminuir la intensidad del derrame cerrando las vías de flujo del mismo. Estas vias pueden estar representadas mediante válvulas en las lineas de fuga de productos o simplemente las válvulas localizadas en cada uno de los diques.

Siempre haga una inspección visual rápida del áreas antes de realizar cualquier movimiento. No tome riesgos. Utilize equipos de seguridad y su sentido común antes de tratar de solucionar el problema. Obtenemos mejor resultado en la solución del problema cuando usted no es parte del problema.

RESPONSABILIDADES DE KARMAR Y CAPECO

AREA DE INSPECCIÓN	CONTRATISTA	OPERACIONES
BOMBAS	KARMAR	
PIPELINES	KARMAR	
CANALES AGUAS DE CORRENTÍA	KARMAR	
ALCANTARILLADOS DE PROCESO	KARMAR	
ÁREAS DE PROCESO	KARMAR	
ALMACEN DE MATERIALES	KARMAR	
AREAS DE LLENADO Y DESPACHO DE MATERIALES	KARMAR	
TANQUES DE ALMACENAMIENTO DE PRODUCTOS		CPC-OPERADOR TANK FARM
	KARMAR	
LÍNEAS DE TRANSFERENCIA AL MUELLE		CPC-SEGURIDAD MANTENIMIENTO

DICCIONARIO

PALABRA	DEFINICIÓN
PUMPS	Bombas
PIPELINES	Líneas de tuberías o estante soportan líneas de tuberías
STORMWATER	Aguas de correntía o aguas de lluvia
CHANNEL	Canal
PROCESS SEWERS	Alcantarillas de Proceso
PROCESS AREA	Área de Proceso
MATERIALS STORAGE	Almacenamiento de Materiales
LOADING AND UNLOADING AREAS	Áreas de llenado y despacho de materiales
STORAGE TANKS	Tanques de Almacenamiento
DOCK AREA	Área del Muelle
TRANSFER LINES	Líneas de transferencias
LEAKS	Fugas
VALVES	Válvulas
PIPE SUPPORT	Soporte de tubería
CHECKED BY	Cotejado por
SEAL LEAKING	Sellos de bombas con fuga de material
CURBING	Bordes de diques
DRAIN	Drenaje
SPILLS	Derrames
EVIDENCE OF SPILLS	Indicios o evidencia de derrames
HOUSEKEEPING	Limpieza o mantenimiento ornamental del área
EROSION	Erosión o desplazamiento o desgaste de terreno
SEDIMENT	Sedimento o terreno
NON-STORMWATER	No es aguas de correntía o lluvia
STORMWATER	Aguas de correntía o lluvia
OVERFLOW	Desborde
FLOWS	Flujos
PATHWAYS	Vías de paso o servidumbre
CLEAR PATHWAYS	Vías de paso o servidumbre limpias
CONTAINMENT	Contenedor o dique de tanques
HOSE CONNECTOR	Conector para mangas
ACCESS RAMP	Rampa de acceso

CARIBBEAN PETROLEUM CORPORATION
DEPARTAMENTO DE INGENIERIA

ADIESTRAMIENTO PROGRAMAS DE BMP Y SPCC PLANS

Nombre: _____

Fecha: _____

Cierto o Falso

☐ C ☐ F 1. Es importante que el grupo a cargo de realizar las inspecciones periódicas esté consciente de la importancia de su trabajo en la parte ambiental.

☐ C ☐ F 2. Nunca el inspector deberá tomar riesgos en la solución de algún problema a menos que el supervisor de turno y/o el ingeniero a cargo del programa lo obligue a hacerlo.

☐ C ☐ F 3. Cualquier fuga de producto representa un derrame de bajo o alto potencial, y por lo tanto será un riesgo directo para el personal obrero, la humanidad y el ambiente.

HOJAS DE INSPECCIÓN BMP/SPCC
CAPECO

Explique Breve

1. Propósito BMP

2. Propósito SPCC

3. Que significan las siglas BMP

4. Que significan las siglas SPCC

Indique

1. Que inspecciones se realizan mensuales.

2. Que inspecciones se realizan cada tres (3) meses.

3. Donde se encuentran el LPG STORAGE TANKS.

4. En medio de que tanques se encuentra la calle "5th Street"

5. En que tanques se almacena ácido sulfúrico.

6. En que tanques se almacena CRUDE

7. El tanque 001 es para almacenar _____ y está localizado cerca de _____.

Appen D

Appendix D

Date of Last Update: July '97

FACILITY INFORMATION FORM

Caribbean Petroleum Refining, L.P.
Bayamon, Puerto Rico

Facility Name: Caribbean Petroleum Refining, L.P.

Location (Street Address): Carr. #28 Km. 2 Urban Industrial Luchetti

City: Bayamon State: Puerto Rico Zip: 00961

County: N/A Phone Number: (787)785-0520

Latitude: 18 Degrees 25 Minutes 12 Seconds North

Longitude: 66 Degrees 08 Minutes 12 Seconds West

Well Protection Area: The CPR facility is not located within a wellhead protection area

Qualified Individual(s): Miguel Berrios

Position: Operations Manager

Work Address: same as facility

Home Address: 106, 4th Street Flamingo Hills Bayamon, Puerto Rico 00961

Emergency Phone Number: work - 785-0520 ext. 273 home - 780-5162

Date of Oil Storage Startup: August 1, 1955

Current Operations: SIC Code: 2911, Petroleum Refining

Date(s) and Type(s) of Substantial Expansion(s): Refining and storage capacity has increased substantially since start up of the plant in 1955. Table 2-2 provides a summary of refinery expansions. Table 4-1 indicates dates of construction of storage tanks since start up of the facility.

EMERGENCY NOTIFICATION PHONE LIST

Caribbean Petroleum Refining LP

Bayamon, Puerto Rico

Reporter's Name:
Date:
Facility Name:
Owner Name:
Facility Identification Number:
Date and Time of Each NRC Notification:

Personnel	Day Phone No/Refinery Ext.	Home Number/ Cellular Number
Qualified Individual (Operations Manager)-Miguel Berrios	785-0520/273	780-5162/612-0695 Beeper 760-8585-U 3309
Qualified Individual Alternate (Engineering Manager)-Jorge L. Davila	785-0520/278	781-0258
Qualified Individual Alternate (Process Engineeer)-Domingo Perez	785-0520/356	730-0819
Public Affairs Officer (Refinery Manager)-Julio D. Hernandez	785-1930	720-8819/318-2033
Public Affairs Officer Alternate (Planning & Economics Manager)-Norberto Sepulveda	785-0520/208	743-1821/612-8711 Beeper 760-8585-U 127-0194
Maintenance Supervisor - Ferdinand Garcia	785-0520/274	720-4744/380-0619 Beeper: 760-8585 U 398-4109
Safety Supervisor-Jorge Perez	785-0520/251	786-5795
Managing Director	785-0520/202	750-8305
Planning Engineer - Francisco Justinianes	785-0520/355	797-8791/614-4041 Beeper: 760-8585-U 389-4110
Purchasing Supervisor-Carlos Cantero	785-0520/217	251-7258
Oil Acct. Supervisor	785-0520/220	740-6111
Intertek-Chris Hamilton	785-0520/244	791-7121

EMERGENCY NOTIFICATION PHONE LIST

Caribbean Petroleum Refining LP

Bayamon, Puerto Rico

Emergency Organization	Phone Number
CPR Response Team	785-0520/356/325/251
Spill Response Contractor	720-8785/836-2221
Bayamon Fire Department	785-2330/3032
Bayamon Police Department	343-2020
U.S. Coast Guard	722-2943 or 722-2697
National Response Center	(800)424-8802
Environmental Quality Board	767-8181/766-2863 evening: 353-5130/383-5131
Department of Natural Resources	724-8774
Department of Transportation (DOT)	722-2929
Puerto Rico Aqueduct and Sewer Authority	281-7878
Local Emergency Planning Committee	788-6519
San Pablo Hospital	740-4774, 785-1225
Hermanos Melendez Hospital	798-8181
Matilde Brenes Hospital	786-0050
Weather Report	253-0840

SPILL RESPONSE NOTIFICATION FORM

Caribbean Petroleum Refining, L.P.
Bayamon, Puerto Rico

Reporter's Last Name: _____
First: _____
Middle.: _____
Position: _____
Phone Numbers:
Day ( ) -
Evening ( ) -

Company: _____
Organization Type: _____
Address: _____

City: _____
Zip: _____
Were Materials Discharged? _____ (Y/N)
Confidential? _____ (Y/N)
Meeting Federal Obligations to Report? _____ (Y/N) Date Called: _____
Calling for Responsible Party? _____ (Y/N) Time Called: _____

Incident Description

Source and/or cause of Incident: _____
_____
_____

Date of Incident: _____
Time of Incident: _____

Incident Address/Location: _____
_____
Nearest City: _____ State: _____
County: _____ Zip: _____
Distance from City: _____ Units of Measure: _____
Direction from City: _____
Section: _____ Township: _____
Range: _____ Borough: _____

Container Type: _____ Tank Oil Storage Capacity: _____ (gal/bbl)
Facility Oil Storage Capacity: _____ (gal/bbl)
Facility Latitude- Degrees: _____ Minutes: _____ Seconds: _____

SPILL RESPONSE NOTIFICATION FORM

Caribbean Petroleum Refining, L.P.
Bayamon, Puerto Rico

Material:

CHRIS Code	Discharged Quantity	Unit of Measure	Material Discharged in Water	Quantity	Unit of Measure

Response Action:

Actions taken to Correct, Control or Mitigate Incident: _____

Impact:

Number of Injuries: _____ Number of Deaths: _____
Were there Evacuations? _____ (Y/N) Number Evacuated: _____
Was there any Damage? _____ (Y/N) Damage in Dollars: _____
Medium Affected: _____

Description: _____

Additional Information:

Any information about the incident not recorded elsewhere in the report: _____

Caller Notifications:

EPA? _____ (Y/N) USCG? _____ (Y/N) State? _____ (Y/N)
Other? _____ (Y/N) Describe: _____

OSRO RESPONSE EQUIPMENT LIST

Caribbean Petroleum Refining, L.P.
Bayamon, Puerto Rico

Type: Rope Mop Skimmer
Operational Status: Operable
Model: VMW92-8
Year:
Quantity: 1
Capacity (gal/min): 332.5 @ 100 FPM (7.92 bbl)
Daily Effective Recovery Rate (gal/24 hrs): 478,800 @ 100 FPM (11,400 bbl)
Storage Location: Induchem Environmental Services, Inc., Guaynabo, Puerto Rico

Type: Oil Mop, Inc. Rope Mop Skimmer
Operational Status: Operable
Model: Mark II-4D
Year:1994
Quantity: 1
Capacity (gal/min): 64.4 @ 100 FPM (1.53 bbl)
Daily Effective Recovery Rate (gal/24 hrs): 92,736 @ 100 FPM (2,208 bbl)
Storage Location: Induchem Environmental Services, Inc., Guaynabo, Puerto Rico

Type: Oil Mop, Inc. Rope Mop Skimmer
Operational Status: Operable
Model: Mark I-3E
Year:1994
Quantity: 1
Capacity (gal/min): 3.3 (0.08 bbl)
Daily Effective Recovery Rate (gal/24 hrs): 4,800 (114.3 bbl)
Storage Location: Induchem Environmental Services, Inc., Guaynabo, Puerto Rico

Type: Douglas Engineering Skim-Pak
Operational Status: Operable
Model: 18000
Year:1994
Quantity: 1
Capacity (gal/min): 3.3 (0.08 bbl)
Daily Effective Recovery Rate (gal/24 hrs): 4,800 (114.3 bbl)
Storage Location: Induchem Environmental Services, Inc., Guaynabo, Puerto Rico

OSRO RESPONSE EQUIPMENT LIST

Caribbean Petroleum Refining, L.P.
Bayamon, Puerto Rico

BOOMS

Type: 24in. Curtain
Operational Status: Operable
Model:
Year:1994
Quantity: 2
Size (length-ft): 1,500 total
Containment Area (sq. ft.): 140,625
Storage Location: Induchem Environmental Services, Inc., Guaynabo, Puerto Rico
Induchem Environmental Services, Inc., Penuelas, Puerto Rico

Type: 21in. Curtain
Operational Status: Operable
Model:
Year:1993
Quantity: 1
Size (length-ft): 250 total
Containment Area (sq. ft.): 3,906.25
Storage Location: Induchem Environmental Services, Inc., Guaynabo, Puerto Rico

SORBENTS

Type: Oilup Sorbent Booms 5in. X 10ft L
Operational Status: Operable
Year Purchased: 1995
Amount: unlimited
Absorption Capacity: 6 gals. each
Storage Location: Induchem Environmental Services, Inc., Guaynabo, Puerto Rico

Type: Oilup Sorbent Pillows 17in. X 19ft
Operational Status: Operable
Year Purchased: 1995
Amount: unlimited
Absorption Capacity: 135 gals.
Storage Location: Induchem Environmental Services, Inc., Guaynabo, Puerto Rico

OSRO RESPONSE EQUIPMENT LIST

Caribbean Petroleum Refining, L.P.
Bayamon, Puerto Rico

Type: Sweep Booms 19in. x 100ft. X 3/8in.
Operational Status: Operable
Year Purchased: 1995
Amount: unlimited
Absorption Capacity: 135 gals.
Storage Location: Induchem Environmental Services, Inc., Guaynabo, Puerto Rico

Type: Oil Snares 100ft..
Operational Status: Operable
Year Purchased: 1995
Amount: unlimited
Absorption Capacity: 148 gals. per 65lb. pkg.
Storage Location: Induchem Environmental Services, Inc., Guaynabo, Puerto Rico

Type: Oilup Sorbent Sheets 38in. x 144ft.
Operational Status: Operable
Year Purchased: 1995
Amount: unlimited
Absorption Capacity: 51 gals./roll
Storage Location: Induchem Environmental Services, Inc., Guaynabo, Puerto Rico

HAND TOOLS

Type	Quantity	Storage Location
Shovels	50	Induchem, Guaynabo
Rakes	50	Induchem, Guaynabo
Pick-axes	10	Induchem, Guaynabo
Hammers	10	Induchem, Guaynabo
Air Drills	2	Induchem, Guaynabo
Power Drills	3	Induchem, Guaynabo
Wrenches, set	2	Induchem, Guaynabo
Screwdrives, set	2	Induchem, Guaynabo
Drum Pumps	5	Induchem, Guaynabo

OSRO RESPONSE EQUIPMENT LIST

Caribbean Petroleum Refining, L.P.
Bayamon, Puerto Rico

COMMUNICATIONS EQUIPMENT

Type	Quantity	Storage Location
Walkie Talkies	10	Induchem, Guaynabo
Bull Horn	2	Induchem, Guaynabo
Page Radios (Beepers)	20	Induchem, Guaynabo
Car Telephones	15	Induchem, Guaynabo

HEAVY EQUIPMENT

Type	Quantity	Storage Location
Vacuum Truck	10	Induchem, Guaynabo
Super Vacuum Truck	1	Induchem, Guaynabo
Tractor	2	Induchem, Guaynabo
Hydroblasters	10	Induchem, Guaynabo
Platform Truck, F-500	4	Induchem, Guaynabo
Crane, 15 Tons	1	Induchem, Guaynabo
Air Compressor, 600/900 CFM	1	Induchem, Guaynabo
Boat/Motors	2	Induchem, Guaynabo

OSRO RESPONSE EQUIPMENT LIST

Caribbean Petroleum Refining, L.P.
Bayamon, Puerto Rico

Equipment	Quantity
Hazmat Emergency Response Unit	1
Emergency Response Support Van	2
Emergency Response Trailer	2
Equipment & Passenger Van	10
Platform Truck F-500	4
Enclosed Truck & Pick-up Vehicles	6
F-600, F-700 or similar	5
Holding and/or Rolling Tank	10
Boiler 50 HP, 150 PSI Stream	1
Vacuum Truck - 3,000 gals.	10
Super Vacuum - 16 c/y	1
Hydroblaster - up to 10,000 PSI	10
Tractor	2
Steam Cleaner - up to 3,000 PSI	3
35,000 watts Generator	1
Air Compressor - 600/900 CFM	1
Illumination Tower 4 x 1,000 watts	1
Oil Skimmer - Mark 1-3E 200 gals./hr	1
Oil Skimmer - Mark II-4D 3,864 gals./hr	1
Oil Skimmer SkimPak Mod. 18000	1
Oil Containment Boom 24in.- 750ft.	2
Support Boat with Motor	2
Full Face Respirator	20
Half Face Respirator & Cartridges	20
5-min Escape Bottles & Mask	20
SCBA Units	15
SCBA Refill	30

Date of Last Update: July '97

CPR RESPONSE EQUIPMENT LIST

Caribbean Petroleum Refining, L.P.
Bayamon, Puerto Rico

Item	Description	Location	Operating Status
Skimmer	Model JBF DIP 3001 with 220 (gal/min) capacity	Southwest corner of facility	Operational
Containment Boom	ABASCO "BETA IB-PVC Special" 50 Linear ft. of 6in. freeboard/6in. draft.	Southwest corner of facility	Operational
Sorbent Boom	700 ft boom 1,000 ft boom pads	Southwest corner of facility	Operational
Fire Fighting Apparatus	Foam trailer, Fire truck,	Firehouse	Operational
Fire Fighting Equipment	Fire pumps, Foam boxes, Fire extinquishers	Throughout facility	Operational
Personal Protective Equipment	Suits, goggles, gloves, boots	Firehouse	Operational
Communication Equipment	Walkie-Talkies	Throughout facility	Operational
Vacuum Truck	3,000 gal capacity	Wastewater Treatment Plant	Operational

Date of Last Update: July '97

RESPONSE EQUIPMENT TESTING/DEPLOYMENT DRILL LOG

Caribbean Petroleum Refining, L.P.
Bayamon, Puerto Rico

Type: Rope Mop Skimmer
Last Inspection or Response Equipment Test Date: June, 1997
Inspection Frequency: Monthly
Last Deployment: May, 1997
Deployment Frequency: Bi-Monthly
Oil Spill Removal Organization Certification

Type: Oil Mop, Inc. Rope Mop Skimmer
Last Inspection or Response Equipment Test Date: June, 1997
Inspection Frequency: Monthly
Last Deployment: May, 1997
Deployment Frequency: Bi-Montly
Oil Spill Removal Organization Certification

Type: Oil Mop, Inc. Rope Mop Skimmer
Last Inspection or Response Equipment Test Date: June, 1997
Inspection Frequency: Monthly
Last Deployment: May, 1997
Deployment Frequency: Bi-Monthly
Oil Spill Removal Organization Certification

Type: Douglas Engineering Skim-Pak
Last Inspection or Response Equipment Test Date: June, 1997
Inspection Frequency: Monthly
Last Deployment: May, 1997
Deployment Frequency: Bi-Monthly
Oil Spill Removal Organization Certification

Type: JBF DIP 3001
Last Inspection or Response Equipment Test Date: June, 1997
Inspection Frequency: Monthly
Last Deployment: January, 1997
Deployment Frequency: Bi-Annually
Oil Spill Removal Organization Certification

FACILITY RESPONSE TEAM

Caribbean Petroleum Refining, L.P.

Bayamon, Puerto Rico

CPR Personnel	Response Time	Day/Evening Phone No.
Qualified Individual Miguel Berrios	1 Hour	785-0520 ext. 273/780-5162 Cel. 612-0695/Beeper 760-8585 U 3309
Qualified Individual Alternate Jorge L. Davila	1 Hour	785-0520 ext. 278/781-0258
Qualified Individual Alternate Domingo Perez	1 Hour	785-0520 ext. 356/730-0819
Public Affairs Officer Julio D. Hernandez	1 Hour	785-1930/720-8819 Cel.: 318-2033
Public Affairs Officer Alternate Norberto Sepulveda	1 Hour	785-0520 ext. 208/743-1821/Cel. 612-8711 Beeper: 760-8585 U 127-0194
Safety Officer Jorge Perez	1 Hour	785-0520 ext. 251/786-5795
Maintenance Supervisor Ferdinand Garcia	1 Hour	785-0520 ext. 274/720-4744 Cel. 380-0619 Beeper: 760-8585 U 4109
CPR Emergency Response Team Members	**Response Time**	**Day/Evening Phone No.**
Flor Velez	1 Hour	785-0520/0521
Jose Negron	1 Hour	785-0520/0521/859-8981
Jesus M. Vazquez	1 Hour	785-0520/0521/862-8321
Manuel Alvarez	1 Hour	785-0520/0521/
Alex Alvarez	1 Hour	785-0520/0521730-4683
Jose A Guzman	1 Hour	785-0520/0521/859-7098
Rafael Molina	1 Hour	785-0520/0521/859-7291

FACILITY RESPONSE TEAM

Caribbean Petroleum Refining, L.P.
Bayamon, Puerto Rico

Induchem Personnel	Response Time [1]	Day/Evening Phone No.
Edgardo Tormos (Vice President)	2 Hours	720-6868/380-4444
Rolando Watley (Division Manager)	2 Hours	720-6868/757-9454
Luis Rodriguez (Division Manager)	2 Hours	720-6868/272-0182
Wilberto Martinez (Project Manager)	2 Hours	720-6868/780-6232
Miguel Oliveras (Project Manager)	2 Hours	720-6868/375-5968
Carlos Serrano (Supervisor)	2 Hours	720-6868/798-7881
Gabriel Gracia (Supervisor)	2 Hours	720-6868/272-2019
Pablo Torres (Env. Technician)	2 Hours	720-6868/378-8598
David Rivera (Env. Technician)	2 Hours	720-6868/888-2261
Andres Torres (Env. Technician)	2 Hours	720-6868/727-5917
Jose C. Guzman (Env. Technician)	2 Hours	720-6868/780-8707
Manuel Figueroa (Env. Technician)	2 Hours	720-6868/798-1308
Eric Matos (Logistics)	2 Hours	720-6868/761-7903
Yulissam Mosanto (Chem. Engineer)	2 Hours	720-6868/797-4071
Jorge Ruiz (Supervisor)	2 Hours	720-6868/397-2650
Julio Cruz (Division Manager)	2 Hours	720-6868/375-5236
Edgard Cruz (Supervisor)	2 Hours	720-6868/376-8652
Josue Cabret (Supervisor)	2 Hours	250-0140 U-13798
Santurnino Rios (Technician)	2 Hours	720-6868/780-6435
Jose I. Gomez (Technician)	2 Hours	720-6868/845-4021
Daniel Diaz (Technician)	2 Hours	720-6868/845-4021
Jose Mendoza (Technician)	2 Hours	720-6868/251-3743
Jose Morales (Technician)	2 Hours	720-6868/726-1092
Bristol Castro (Mechanic)	2 Hours	720-6868/793-7119
Felix Bermudez (Technician)	2 Hours	720-6868/845-2768
Luis Texidor (Technician)	2 Hours	720-6868/845-3476
Jose M. Borges (Technician)	2 Hours	720-6868/845-6268
Jose M. Cedeno (Technician)	2 Hours	720-6868/845-2618
Reynaldo Galindez (Technician)	2 Hours	720-6868/752-1403
Ismael Garcia (Technician)	2 Hours	720-6868/768-8429
Johnny Jimenez (Technician)	2 Hours	720-6868/273-6297
Esther Torres (Technician)	2 Hours	720-6868/797-2003

FACILITY RESPONSE TEAM

Caribbean Petroleum Refining, L.P.
Bayamon, Puerto Rico

Induchem Personnel	Response Time [1]	Day/Evening Phone No.
Jose Abreu	2 Hours	720-6868/765-3702
Alexis N. Alvarado	2 Hours	720-6868/845-7144
Jose M. Borges	2 Hours	720-6868/845-6268
Victor J. Borges	2 Hours	720-6868/845-4919
Hector Borgos Diaz	2 Hours	720-6868/888-4198
Jose R. Burgos	2 Hours	720-6868/845-4021
Angel Burgos Figueroa	2 Hours	720-6868/887-5869
Robert Burgos Garcia	2 Hours	720-6868/887-5869
Sandy Calderon Lopez	2 Hours	720-6868/270-1248
Jaime E. Colon	2 Hours	720-6868/795-5146
Jorge Cruz De Jesus	2 Hours	720-6868/847-1516
Joanis Cruz Santiago	2 Hours	720-6868/269-2008
Claudio Cuevas Santana	2 Hours	720-6868/723-7379
Bienvenido De Leon	2 Hours	720-6868/751-2138
Tomas De Jesus	2 Hours	720-6868/845-2404
Hector Manuel Delgado	2 Hours	720-6868/763-6902
Daniel Diaz Molina	2 Hours	720-6868/845-4021
Gregory Encarnacion	2 Hours	720-6868/727-7601
Carlos Encarnacion	2 Hours	720-6868/727-7601
Milton Escobar	2 Hours	720-6868/795-3455
Nurys Febres	2 Hours	720-6868/780-7911/390-5770
Isak Fernandez	2 Hours	720-6868/848-2511
Ismael Garcia Gual	2 Hours	720-6868/768-8424
Juan Gonzalez	2 Hours	720-6868/768-3412
Abimael Hernandez	2 Hours	720-6868/790-5667
Benjamin Hernandez	2 Hours	720-6868/845-4086
Johnny Jimenez	2 Hours	720-6868/273-6297
Jose Luis Lopez Torres	2 Hours	720-6868/845-5254
Frances Madonado	2 Hours	720-6868/726-6478
Luis Malave	2 Hours	720-6868/845-4426
Francisco Malave	2 Hours	720-6868/760-5539
Reynaldo Marin	2 Hours	720-6868/784-1384

FACILITY RESPONSE TEAM

Caribbean Petroleum Refining, L.P.
Bayamon, Puerto Rico

Induchem Personnel	Response Time [1]	Day/Evening Phone No.
Andres Matos	2 Hours	720-6868/768-5804
Jose Mendez Sanchez	2 Hours	720-6868/782-0836
Jose Miranda	2 Hours	720-6868/845-5811
Roberto Morales de Jesus	2 Hours	720-6868/839-6224
Wilfredo Morales	2 Hours	720-6868/845-5967
Henry Mota	2 Hours	720-6868/767-1641
Reynaldo Munoz	2 Hours	720-6868/845-5262
Hector Luis Ortiz	2 Hours	720-6868/845-2121
Pedro L. Ortiz	2 Hours	720-6868/845-3731
Jorge L. Ortiz	2 Hours	720-6868/845-5313
Jose J. Ortiz	2 Hours	720-6868/845-4021
Angel R. Ortiz	2 Hours	720-6868/845-2988
Mariano Pagan Cruz	2 Hours	720-6868/783-0319
Pedro J. Perez	2 Hours	720-6868/845-4519
Jose Pichardo	2 Hours	720-6868/765-3702
Fernando Quinones	2 Hours	720-6868/845-5956
Efrain Quinones	2 Hours	720-6868/845-3455
Santurino Rios	2 Hours	720-6868/786-4472
Miguel Rivera	2 Hours	720-6868/845-5596
Miguel Rivera	2 Hours	720-6868/848-5114
Martin Rivera	2 Hours	720-6868/780-7911
Pablo Rivera	2 Hours	720-6868/845-5126
Victor Rivera	2 Hours	720-6868/726-6865
Jose A. Rodriguez	2 Hours	720-6868/845-4203
Derek Ellerbe Rodriguez	2 Hours	720-6868/845-2004
Harold Rodriguez	2 Hours	720-6868/845-2004
Carmen Rojas	2 Hours	720-6868/799-0604/799-2195
Heriberto Sanchez	2 Hours	720-6868/878-6529
Francisco Sanchez	2 Hours	720-6868/845-6546
Karlos Serrano	2 Hours	720-6868/757-3121
Angelino Serrano	2 Hours	720-6868/728-4621
Gilberto Torres Santiago	2 Hours	720-6868/845-5217

FACILITY RESPONSE TEAM

Caribbean Petroleum Refining, L.P.
Bayamon, Puerto Rico

Induchem Personnel	Response Time [1]	Day/Evening Phone No.
Ester Torres	2 Hours	720-6868/797-2003
Elpidio Varcarcel	2 Hours	720-6868/845-6084
Rosa Velez	2 Hours	720-6868/726-6865
Angel Velez	2 Hours	720-6868/726-6865
Jaime Villard	2 Hours	720-6868/724-0483
Andres Vilorio	2 Hours	720-6868/727-7950
Edwin Zayas Guzman	2 Hours	720-6868/793-8472

[1] A sufficient number of team members will arrive at the site within two hours

Response Resources for Small, Medium and Worst Case Spills

The required response capacities in the event of a worst case spill are summarized in the table below. Worksheets are presented in Attachment C. These volumes are based on a worst case discharge of 217,000 bbls of Group IV oil. (Although CPR also manages Groups I, III and V oil, Group IV oil would result in the largest single spill event.) Planning volume have been calculated based on response in a "river and canal" environment.

Tier	On-Water Response Capacity Contracted For (barrels/day)	On-Water Response Capacity Required but Not Contracted For (barrels/day)
1	1,500	16,728
2	3,000	21,302
3	6,000	30,456

The above response capacity figures assume that all oil released from a tank will eventually be discharged into a surface water body. As described in Section 1.7.3 below, it is estimated that only about one half of the oil released from a tank will reach the surface water. The remainder will be contained in adjacent containment areas and stormwater sewers, will pool in local low areas at the site and will be attenuated in surface wetland areas. In addition to the on-water response capacity described above, the shoreline cleanup volume has been calculated at 227,850 barrels (see Attachment B).

For all spill events, CPR's in-house spill response team will provide initial response activities. In addition, CPR has contracted with Induchem Environmental Services for response resources in the event of a small, medium or worst case spill of oil. Induchem will provide personnel and equipment required to respond to any such spill up to and beyond Tier 1, 2 and 3 response levels. All Induchem equipment described below is stored in Induchem's facility in Guaynabo, Puerto Rico, which is located less than five miles from the CPR facility. Tables 3-3a, 3-3b and 3-7 provide lists of Induchem's and CPR's equipment and personnel, respectively. Response resources are described below for small, medium and worst case spills.

Small Spill

- CPR response personnel will arrive at the scene within one hour of spill discovery. Initial boom deployment will occur within one hour of the spill discovery. The location of the initial boom deployment will be based on the location and migration characteristics of the spill, but would likely occur at one of the locations along Las Lajas Creek or the malaria control channel as shown on Figure 7-1.

- Initially, a 50-foot section of containment boom will be deployed by CPR personnel. This boom is stored at the CPR shed in the southwest refinery area and can be transported to the scene within one hour. Conservatively assuming that the average stream flow is approximately 1 foot per second during wet weather conditions, the maximum distance that the spill could travel along the creek in one hour is 3,600 feet. The maximum width of Las Lajas Creek and the malaria control channel within a one mile distance downstream of the CPR facility is approximately 20 feet. Therefore, deployment of 1000 feet of boom within one hour of the spill is not necessary nor is it technically feasible. For this reason, CPR maintains a 50 foot section of boom at its facility and will rely on Induchem for additional boom.

- Induchem response personnel will arrive at the scene and deploy additional spill response equipment within two hours of spill discovery. At a minimum, additional spill response equipment will include: (1) containment boom, as necessary, to be deployed at additional locations along Las Lajas Creek and the malaria control channel as shown on Figure 7-1; (2) oil recovery equipment with a minimum effective daily recovery capacity (EDRC) of 50 bbls/day; and (3) temporary storage capacity of 100 bbls. Specific equipment to be provided by Induchem, as necessary, is listed in Table 3-3a.

Medium Spill

- As appropriate, initial response activities will be conducted by CPR personnel as described above.

- Induchem response personnel will arrive at the scene within two hours of spill discovery. Required spill response equipment will be arrive at the scene as soon as possible, but not later than 12 hours from the discovery of the spill. At a minimum, additional spill response equipment will include: (1) sufficient quantities of boom [up to 1500 feet] for oil containment/collection and for protection of fish/wildlife and sensitive environments, to be deployed as necessary at additional locations along Las Lajas Creek, the malaria control channel and San Juan Bay as shown on Figure 7-1; (2) oil recovery equipment with a

minimum EDRC of 600 bbls/day; and (3) equipment for transfer of up to 1200 bbls/day of recovered oil [i.e., vacuum tucks, tanker trucks] to CPR's on-site slop oil tanks. [CPR will use Slop Oil Tanks 1000 and 1001 for storage of recovered oil. Each tank has a storage capacity of 500 barrels. If addional storage capacity s necessary, slop oil will be pumped from Tanks 1000 and 1001 to a suitable bulk storage tank at the CPR facility. The selection of the bulk storage tank to be used will be the responsiblity of the QI.] Specific equipment to be provided by Induchem, as necessary, is listed in Table 3-3a. Boom and recovery equipment specified in Table 3-3a is capable of operating in a river and canal environment.

Worst Case Spill

- As appropriate, initial response activities will be conducted by CPR personnel as described above.

- If necessary, CPR will respond to the spill with appropriate in-house fire apparatus. CPR's fire apparatus is listed in Table 3-3b. CPR's Safety Officer will manage CPR's fire response activities and will coordinate with local Fire Department resources, as necessary.

- Induchem response personnel will arrive at the scene within two hours of spill discovery. Required spill response equipment will arrive at the scene as soon as possible, but not later than times specified for the applicable response tier as follows:

  Tier 1 - 12 hours
  Tier 2 - 36 hours
  Tier 3 - 60 hours

- At a minimum, additional spill response equipment will include:

  (1) Sufficient quantities of boom [up to 1,500 feet] for oil containment/collection and for protection of fish/wildlife and sensitive environments, to be deployed at additional locations along Las Lajas Creek, the malaria control channel and San Juan Bay, as necessary, as shown on Figure 7-1;

  (2) Oil recovery equipment with a minimum EDRC of 1,500 bbls/day within 12 hours, 3,000 bbls/day within 36 hours, and 6,000 bbls/day within 60 hours;

  (3) Equipment for transfer of recovered oil [i.e., vacuum tucks, tanker trucks] to CPR's on-

site slop oil tanks as follows: up to 3,000 bbls/day within 12 hours, 6,000 bbls/day within 36 hours and 12,000 bbls/day within 60 hours. [In the event of a worst case spill, CPR will transfer slop oil from Tanks 1000 and 1001 to a suitable bulk storage tank in order to ensure storage capacity for recovered oil.]

Specific equipment to be provided by Induchem, as necessary, is listed in Table 3-3a. All equipment is located in Guaynabo, less than five miles from CPR Boom and recovery equipment specified in Table 3-3a is capable of operating in a river and canal environment. Also, at least 20% of the on water response equipment will be capable of operating in water of 6 feet or less depth.

As Table 3-3a indicates, Induchem can provide oil recovery equipment with a total EDRC of approximately 14,000 bbls per day, well in excess of contract requirements. If, in the event of a worst case spill, equipment with daily recovery greater than 14,000 bbls per day is required, CPR will hire, as necessary and as required by the US Coast Guard or the USEPA, other response contractors who can provide required capacity. These contractors may be situated in Puerto Rico or in the mainland United States.

If specialized response capabilities are required, CPR will ensure that OSRO response personnel have competed any additional training that may be required to ensure response proficiency. In addition, CPR will contract with local training contractors, if necessary, in order to provide any additional training that may be required for any response personnel.

Figure 7-1 shows the location of the CPR onshore facility as well as the receiving streams that may be impacted. As described above, the dam at Bay View will act to contain spilled oil and prevent it from entering San Juan Bay. Therefore, it is not anticipated that recovery of oil from the Bay will be required (although CPR has made response arrangements in the event that it does impact the Bay). As the figure illustrates, access to Las Lajas Creek, Santa Catalina Creek and the malaria control channel is limited. Also, operation of large scale oil recovery devices within the creeks could be difficult due to the fact that the creeks are shallow and narrow. Therefore, CPR will deploy oil recovery equipment to the maximum extent practicable. For the reasons stated above, required EDRCs may not be achievable in the creek.

DISCHARGE MITIGATION PROCEDURES:
DISCHARGE FROM ONSHORE FACILITY

The following procedures are to be followed in the event of failure, or threat of failure, of an oil storage tank at CPR's tank farm. (These procedures also apply, as appropriate, to other releases from the facility.) Oil released from the tank's secondary containment area could be collected in CPR's stormwater collection system, which surrounds the dike. The collection system consists of a series of in-ground concrete channels, pipes and swales. Oil entering the stormwater system could ultimately be discharged through outfall 002 into Las Lajas Creek. The objective of the spill mitigation procedures is to stop the discharge, if possible, and to prevent the spilled oil from reaching surface water bodies.

Initial Observer

- Attempt to stop discharge, if it can be done without threatening human health.
- Notify shift foreman.
- Notify Emergency Brigade.

Operation Shift Foreman

- If the subject tank is involved in transfer, notify dock operator and instruct to cease pumping at vessel and close valves.
- Notify QI or QI Alternate.
- Shut off all ignition sources close to spill.

Emergency Brigade

- Sound general alarm and evacuate all personnel from impacted area, if necessary, in accordance with facility Evacuation Plan.

INTERIM RESPONSE MEASURES:
DISCHARGE FROM ONSHORE FACILITY

In the event of a discharge or potential discharge of oil from a CPR oil storage tank, and after all spill notification and spill mitigation procedures described above have been implemented, the following procedures are to be followed until the QI or his alternate arrives at the scene.

Shift Foreman

- Follow notification procedures set forth in Section 1.3.

Emergency Brigade

- Assess spill scene for fire and explosion hazards.
- Take measures necessary to abate hazards and protect safety, including deluge of oil slick, evacuation of area, etc.

CPR Spill Response Team

- Assume responsibility for deployment of containment booms along Las Lajas Creek and malaria control channel.
- Direct personnel in implementation of other interim measures.
- Provide support as required to OSRO upon arrival at scene

SPILL RESPONSE PROCEDURES:
DISCHARGE FROM ONSHORE FACILITY

The following procedures are to be implemented in the event of a small, medium and worst case discharge of oil at CPR's onshore facility as a result of failure of an oil storage tank and subsequent failure of the tank's secondary containment system. Response activities will commence as soon as possible after evacuation measures have been taken, if necessary, and after the CPR Emergency Brigade has assessed the fire hazard at the scene and has taken all measures necessary to abate any fire hazard. The QI will determine whether initial response activities should concentrate on the onshore facility or on Las Lajas Creek and the malaria control channel. The QI, after consultation with the USCG, USEPA, PREQB, PRDNR and other regulatory authorities, may modify these procedures according to site-specific conditions.

(1) If spilled material threatens to enter Las Lajas Creek or Santa Catalina Creek, deploy a series of containment booms along Las Lajas Creek and the malaria control channel (refer to Figure 7-1 for locations). Initial boom deployment should be completed within one hour of spill discovery.

(2) Dispatch appropriate recovery equipment to the scene for recovery and temporary storage of recovered oil. Initially, proceed to areas accessible by public road (See Figure 7-1). This will be completed within two hours of discovery of the spill. [Note: Vacuum trucks and other equipment may proceed only to those areas approved by the QI. No equipment will be allowed to enter any wetland area without approval by QI, PRDNR, and other authorities.]

(3) Commence recovery of spilled oil from Las Lajas Creek and/or the malaria control channel. If it is determined that all or part of the released material is Group V oil, suitable response equipment will be required, including pumps, hoses, etc. As rolling tanks are filled, transport recovered product to the refinery and discharge it into designated storage tanks.

(4) Commence recovery of spilled oil from onshore facility using pumps, vacuum trucks and skimmers, as appropriate. Discharge recovered oil into designated storage tanks.

(5) Commence cleanup of impacted wetland only after assessment of environmental damage by QI, PRDNR and other authorities.

SPILL RESPONSE PROCEDURES:
DISCHARGE OF SINKING OIL

The following procedures are to be implemented in addition to the appropriate procedures described above if it is determined that all or part of the material spilled is Group V oil. Response activities are to commence as soon as possible after the CPR Emergency Brigade has assessed the fire hazard at the scene and has taken all measures necessary to abate any fire hazard. The QI, after consultation with the USCG and other regulatory authorities, may modify these procedures according to site-specific conditions. Unless otherwise noted, all activities are to be implemented by a response contractor.

(1) If possible, visually monitor spread of sinking oil from suitable vantage points.

(2) Stage pumps and hoses at suitable locations for the recovery of sinking oil. Prepare hoses for recovery of sinking oil.

PROTECTIVE RESPONSE MEASURES:
DISCHARGE FROM ONSHORE FACILITY

In the event of a failure of a storage tank at CPR's onshore facility, the following measures will be implemented in order to protect sensitive areas. In the event of a small or medium discharge, the QI will decide on which of these specific protective measures are required after consulting with the USCG and other relevant authorities.

(1) A series of protective booms will be deployed across Las Lajas Creek and the malaria control channel at the locations noted on Figure 7-1. These locations may vary due to actual conditions that exist at the time of the spill. Approximately 200 feet of boom will be required.

(2) Response personnel shall be dispatched to the outlet dam of the malaria control channel (location noted on Figure 7-1 to monitor the level of any oil that may escape the protective booms.

(3) If necessary, a containment boom will be deployed north of the dam in order to contain any oil that may escape the dam.